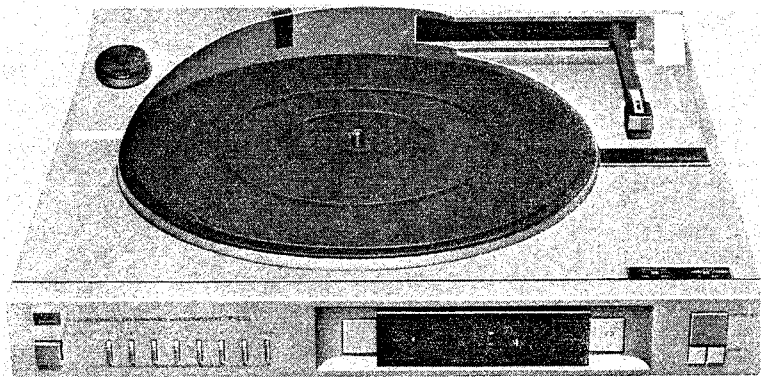
SERVICE MANUAL

FULLY AUTOMATIC DD TURNTABLE

SANSUI P-L50/L40

(Silver & Black Model)



CAUTION

1. Use only replacement parts recommended by the manufacturer.
2. Measure insulation resistance before returning the appliance to the customer to prevent electrical shock.

Sansui

SANSUI ELECTRIC CO., LTD.

• SPECIFICATIONS

• P-L50

Type	Direct-drive turntable
Rated speeds	33-1/3, 45 rpm
Platter	Aluminum alloy diecast, 306 mm (12-1/16") diameter, 0.6 kg (1.3 lbs.) weight
Motor	Coreless and Brushless DC/FG Servo
Wow/flutter	0.028 % (WRMS)
Signal-to-noise ratio	Better than 72 dB (DIN-B) Better than 60 dB (IEC-B)
Tonearm	Statically-balanced type
Effective tonearm length	142 mm (5-5/8")
Cartridge	Dual Magnet type (SV-S505)
Output voltage	2.5 mV (1,000 Hz, 35.4 mm/sec)
Correct load impedance	47 kohms
Frequency response	10 ~ 20,000 Hz
Stylus	0.6 mil diamond stylus (SN-505) replacement stylus)
Dimensions	430 mm (16-29/32") W 114 mm (4-1/2") H 373 mm (14-11/16") D
Weight	6.5 kg (14.3 lbs.) net 7.5 kg (16.5 lbs.) packed
Power consumption	17 W

• P-L40

Type	Direct-drive turntable
Rated speeds	33-1/3, 45 rpm
Platter	Aluminum alloy diecast, 306 mm (12-1/16") diameter, 0.6 kg (1.3 lbs.) weight
Motor	Coreless and Brushless DC/FG Servo
Wow/flutter	0.028 % (WRMS)
Signal-to-noise ratio	Better than 72 dB (DIN-B) Better than 60 dB (IEC-B)
Tonearm	Statically-balanced type
Effective tonearm length	142 mm (5-5/8")
Cartridge	Dual Magnet type (SV-S505)
Output voltage	2.5 mV (1,000 Hz, 35.4 mm/sec)
Correct load impedance	47 kohms
Frequency response	10 ~ 20,000 Hz
Stylus	0.6 mil diamond stylus (SN-505) replacement stylus)
Dimensions	430 mm (16-29/32") W 114 mm (4-1/2") H 373 mm (14-11/16") D
Weight	6.4 kg (14.1 lbs.) net 7.4 kg (16.3 lbs.) packed
Power consumption	12 W

* Design and specifications subject to change without notice for improvements.

9. MAIN PARTS REPLACEMENT

9-1. Replacement of Tone Arm Driving Wire

(See Fig. 4-4 on Page 6, Top View on Page 14)

1) Remove the cabinet. (See How to remove the cabinet on Page 7)
2) Remove the mecha guide.
3) Loosen the tension adjusting screw.
4) Remove the pully (B).
5) Take off the screw Ⓐ fixing the driving wire under the mechanism chassis.

9-2. Replacement of Arm Bearing Ass'y ⑫

(See of Exploded View of Mechanism Ass'y on Page 15)

1) Remove the driving wire.
2) Loosen the hexagon socket head screw ⑯ to remove the tone arm ass'y ⑪.
3) Loosen the nut ⑮ and the pivot ⑭ to remove the arm holder weight ⑬.
4) Loosen the nut ⑯ to remove the arm bearing ass'y.

9-3. Replacement of Lifter Cam ⑩

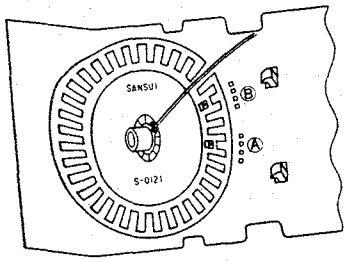
(See Exploded View of Mechanism Ass'y on Page 15)

1) Remove the driving wire.
2) Remove the tone arm Ass'y ⑪.
3) Remove the arm holder weight ⑬.
4) Remove the E-type washer ⑭, plane washer ⑬ and spring ⑮.
5) Remove the lifter plate ⑪.
6) The lifter cam can be taken out.

9-4. Replacement of Hall Element (H300BC)

1) Remove the cabinet. (See How to remove the cabinet on page 7)
2) Pull out the shaft with magnet of D.D. Motor.
3) Wipe off solder at Fig. 9-1 Ⓐ or Ⓑ by soldering iron.

Fig. 9-1



4) Take out the defective IC. (See Fig. 9-2)

Fig. 9-2

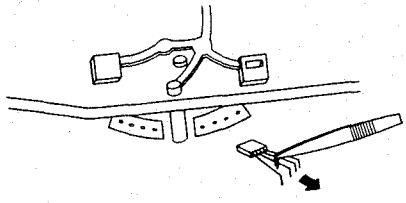
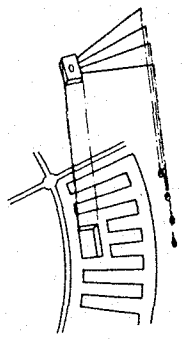


Fig. 9-3



5) Bend lead-wires of new H300BC fitting it's portion of printed circuit board (S-0121). (See Fig. 9-3)
6) Place the new IC (H300BC) on the portion of printed circuit board (S-0121) and bend both outside lead-wires. (See Figs. 9-4, 9-5)

Fig. 9-4

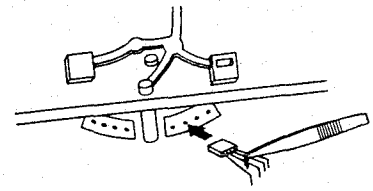
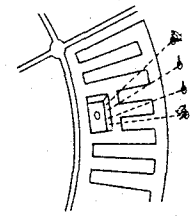


Fig. 9-5

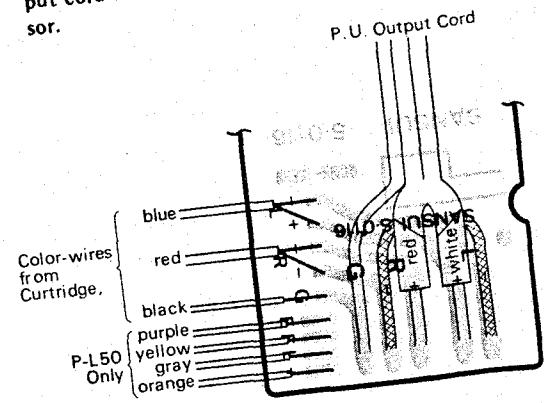


7) Solder point Ⓐ or Ⓑ (See Fig. 9-1)

9-5. Note on Parts Replacement

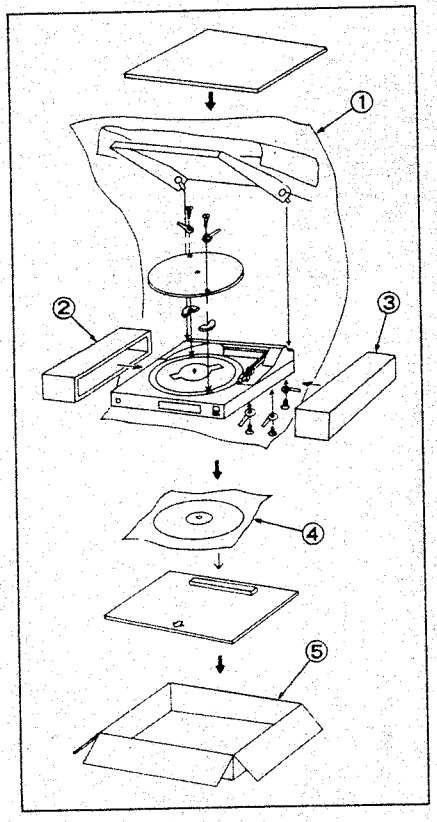
1) When replacing a parts of the mechanism ass'y, remove the stylus.
2) When replacing the worm shaft ass'y (B) ⑥, remove the worm shaft guide ⑤ and the screw ⑦.
3) Refer to Fig. 9-1, when wiring from cartridge (tone arm ass'y ⑪).
4) When replacing a parts of the mechanism ass'y, make proper wirings referring to the top view on page 14 and Fig. 4-3 on page 6.
5) Perform adjustment 4-1, 4-2, 4-4, 4-5 and 4-6, when replacing a parts of the mechanism ass'y.

Fig. 9-6. S-0116 Circuit Board for connections between P.U. Output cord & color wires from cartridge, E sensor and F sensor.



10. PACKING LIST

Parts No.	Stock No.	Description	
1	91122710	Vinyl Bag	
2	13174800	Styrofoam Packing (left)	
3	13174900	Styrofoam Packing (right)	
4	91166000	Vinyl Bag	
5	13148800	Carton Case (Silver Model)	P-L40
	13148900	Carton Case (Black Model)	
	13149100	Carton Case (Silver Model)	P-L50
	13149200	Carton Case (Black Model)	



11. ACCESSORY LIST

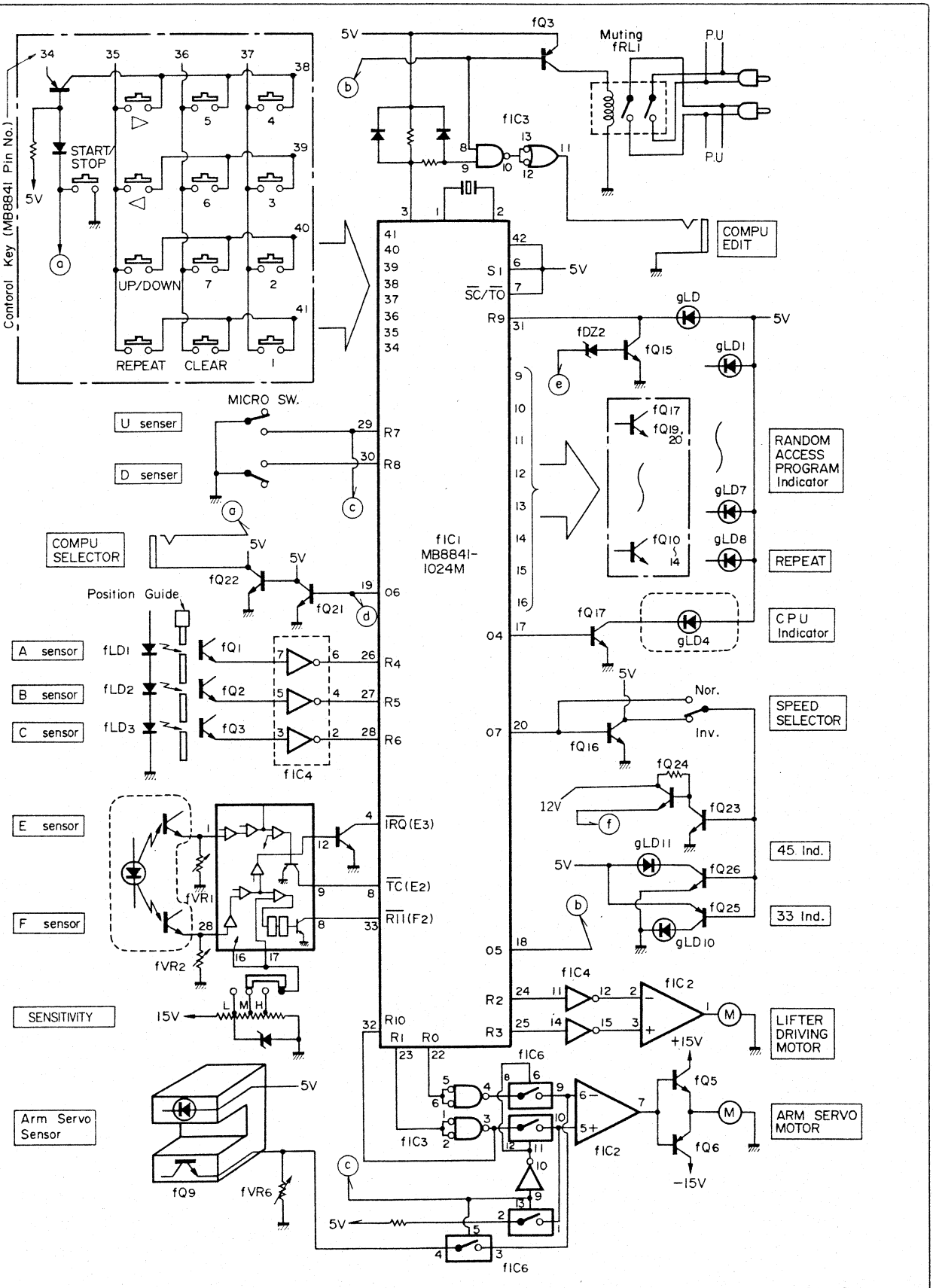
Stock No.	Description
46358700	Operating Instruction (P-L40)
46358900	Operating Instruction (P-L50)
46267300	MINI PLUG CORD, COMPU-SELECTOR, COMPU EDIT

SANSUI ELECTRIC CO., LTD.: 14-1, Izumi 2-chome, Suginami-ku, Tokyo 168 Japan
PHONE: (03) 324-8891/TELEX: 232-2076 (International Division)
SANSUI ELECTRONICS CORPORATION: 1250 Valley Brook Ave. Lyndhurst, N.J. 07071 U.S.A.
333 West Alondra Blvd. Gardena, California 90247 U.S.A.
3036 Koapaka St. Honolulu, Hawaii 96819 U.S.A.
SANSUI ELECTRONICS (U.K.) LTD.: Unit 10A, Lyon Industrial Estate, Rockware Avenue, Greenford, Middx UB6, OAA, England
SANSUI ELECTRONICS G.M.B.H.: Paul Ehrlich Strasse 8, 6074 Rödermark 2, West Germany

Printed in Japan (920030M) (Stock No. 36470700)

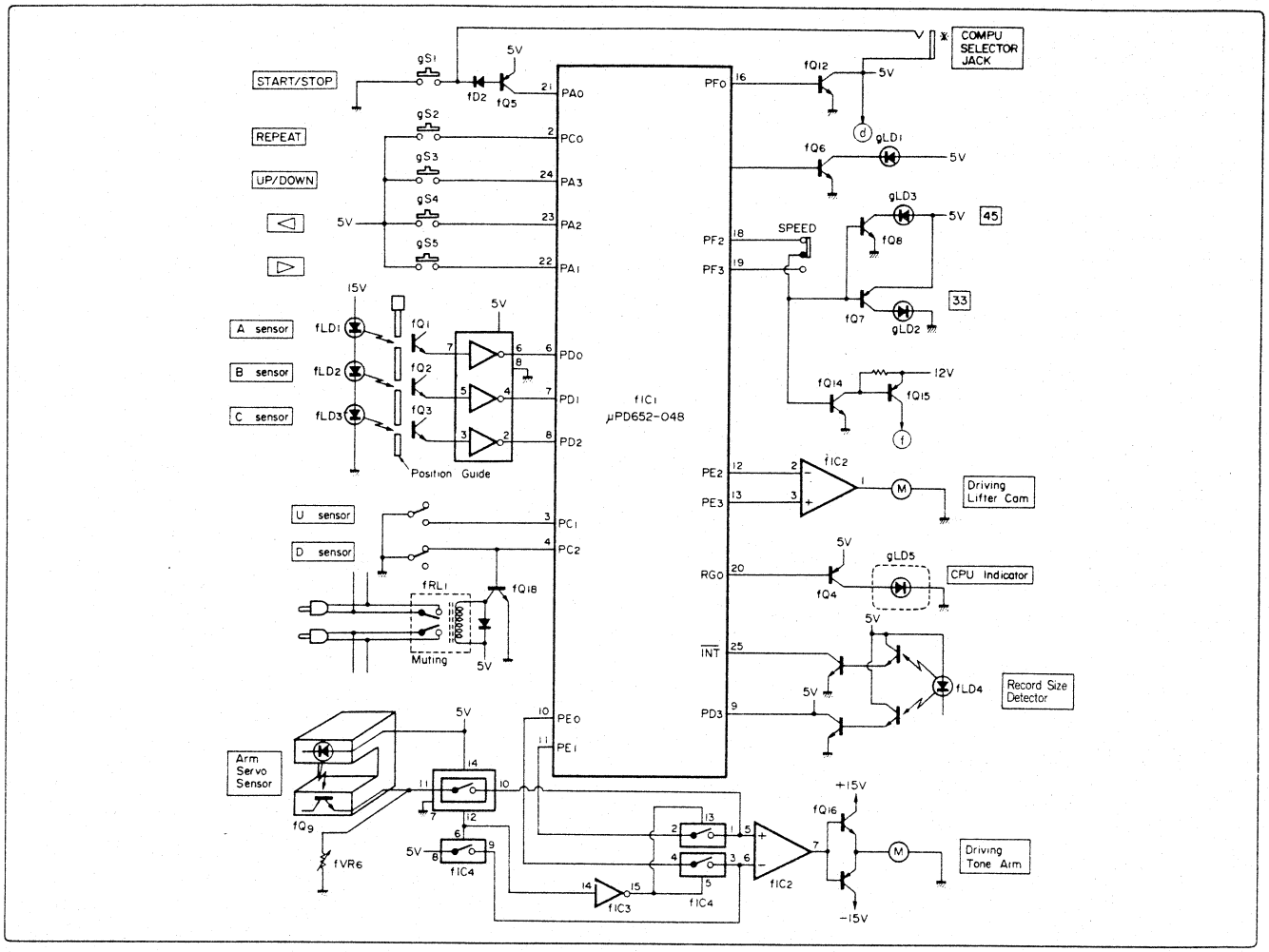
1. BLOCK DIAGRAM

1-1. P-L50 Block Diagram

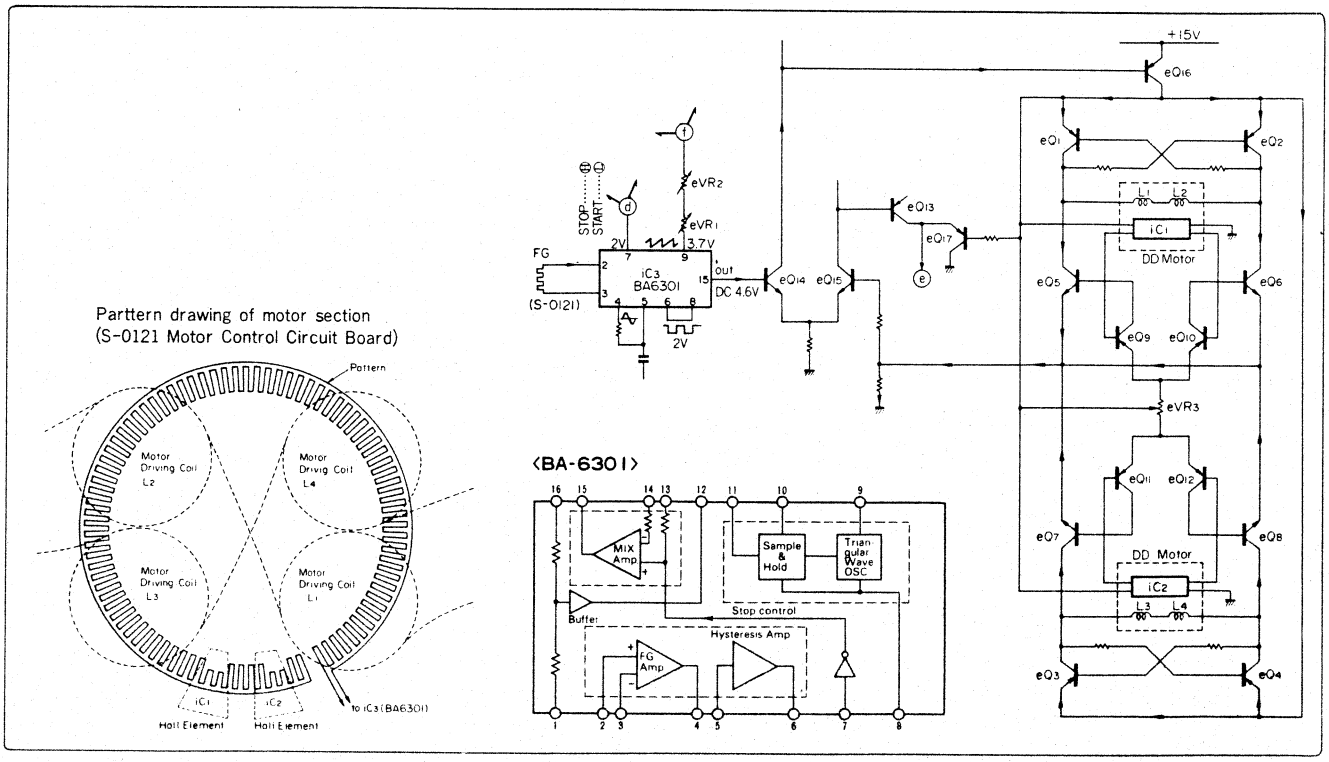


* Since the electrical operations employed in P-L50 are similar to these of P-M7, the explanation of these circuits are omitted from this manual.

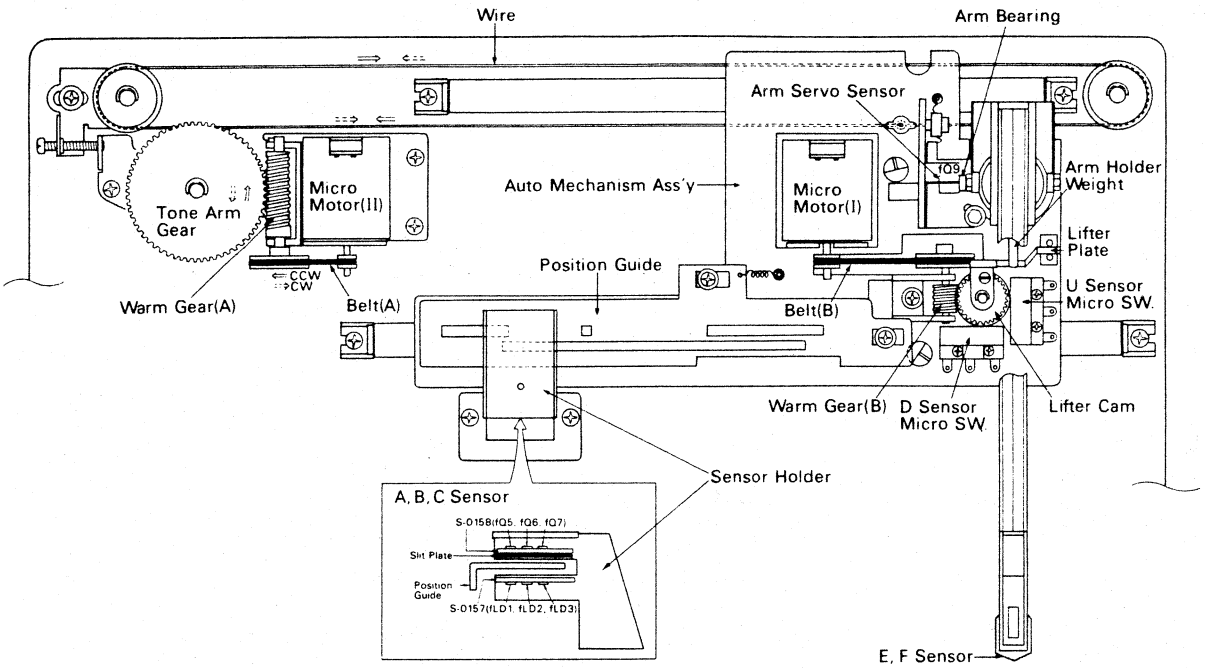
1-2. P-L40 Block Diagram



1-3. DD Motor Control Circuit



2. AUTO MECHANISM VIEW



3. MICRO COMPUTER TIMING CHART

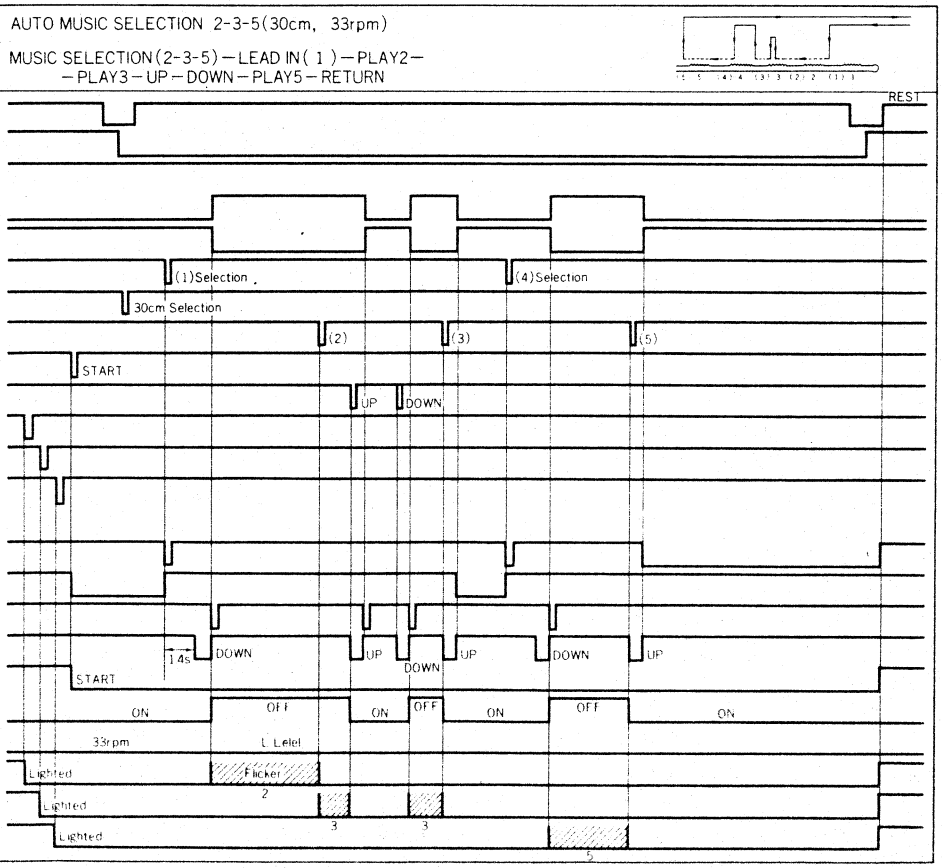
3-1. P-L50 Timing Chart

- **Timing chart 1 AUTO MUSIC SELECTION 2-3-5 (30 cm, 33 rpm)**

MICRO COMPUTER MB8841-566M				
INPUT/OUTPUT			PORT	PIN No.
INPUT	SENSOR	A	R_4	26
		B	R_5	27
		C	R_6	28
		U	R_7	29
		D	R_8	30
		E_2	TC	8
		E_3	IRQ	4
		F_2	R_{11}	33
	START/STOP SW.		R_{12}, K_0	34, 38
	UP/DOWN SW.		R_{13}, K_2	35, 40
	MUSIC SELECTION SW.	2	R_{15}, K_2	37, 40
		3	R_{15}, K_1	37, 39
		5	R_{14}, K_0	36, 38
OUTPUT	MICRO MOTOR (II)	CCW	R_0	22
		CW	R_1	23
	MICRO MOTOR (I) (Lifter)	CCW	R_2	24
		CW	R_3	25
	DD MOTOR START /STOP		O_6	19
	MUTING		O_5	18
	SPEED 33/45rpm.		O_7	20
	MUSIC SELECTION Indicator	2	P_1	10
		3	P_2	11
		5	O_0	13

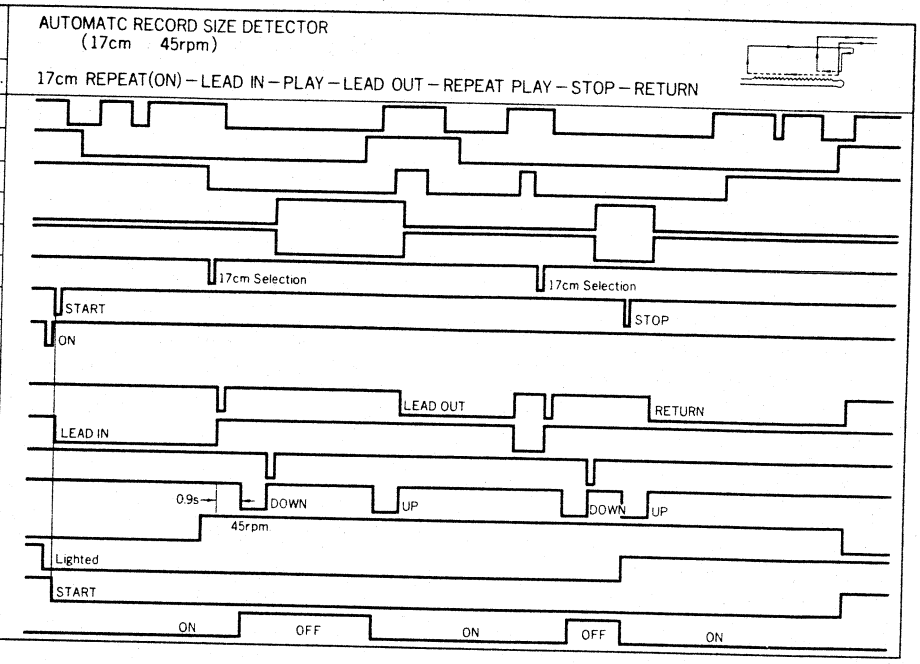
AUTO MUSIC SELECTION 2-3-5(30cm, 33rpm)

MUSIC SELECTION(2-3-5)—LEAD IN(1)—PLAY2—
—PLAY3—UP—DOWN—PLAY5—RETURN



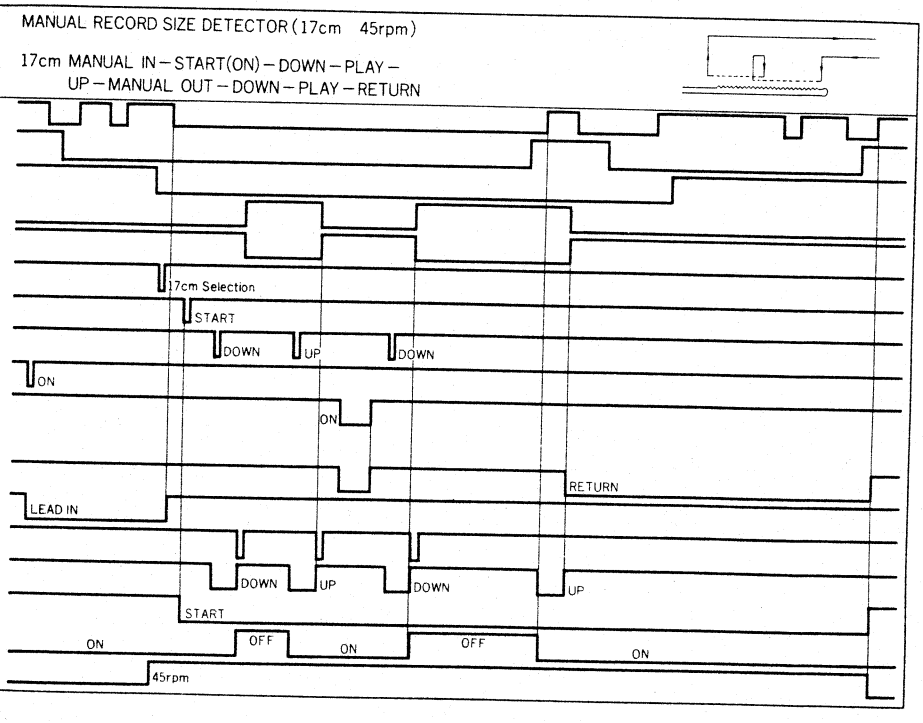
• Timing chart 2 AUTOMATIC RECORD SIZE DETECTOR (17 cm, 45 rpm)

MICRO COMPUTER MB8841-566M					
INPUT/OUTPUT				PORT	PIN No.
INPUT	SENSOR		A	R_4	26
			B	R_5	27
			C	R_6	28
			U	R_7	29
			D	R_8	30
			E_3	$\overline{IRQ}$	4
	START/STOP SW			K_0, R_{12}	38, 34
	REPEAT SW			K_3, R_{13}	41, 35
OUTPUT	Micro Motor (II)		CCW	R_1	22
			CW	R_0	23
	Micro Motor (I) (Lifter)		CCW	R_2	24
			CW	R_3	25
	SPEED 33/45rpm			O_7	20
	REPEAT IND.			O_3	16
	DD MOTOR START /STOP			O_6	19
	MUTING			O_5	18



• Timing chart 3 MANUAL RECORD SIZE DETECTOR (17 cm, 45 rpm)

MICRO COMPUTER MB8841-566M					
INPUT/OUTPUT				PORT	PIN No.
INPUT	SENSOR		A	R_4	26
			B	R_5	27
			C	R_6	28
			U	R_7	29
			D	R_8	30
			E_3	$\overline{IRQ}$	4
	START/STOPSW			K_0, R_{12}	38, 34
	UP/DOWN SW			K_2, R_{13}	40, 35
	MANUAL ◀ SW			K_1, R_{13}	39, 35
	MANUAL ▶ SW			K_0, R_{13}	38, 35
OUTPUT	Micro Motor (II)		CCW	R_0	22
			CW	R_1	23
	Micro Motor (I) (Lifter)		CCW	R_2	24
			CW	R_3	25
	DD MOTOR START /STOP			O_6	19
	MUTING			O_5	18
	SPEED 33/45rpm			O_7	20



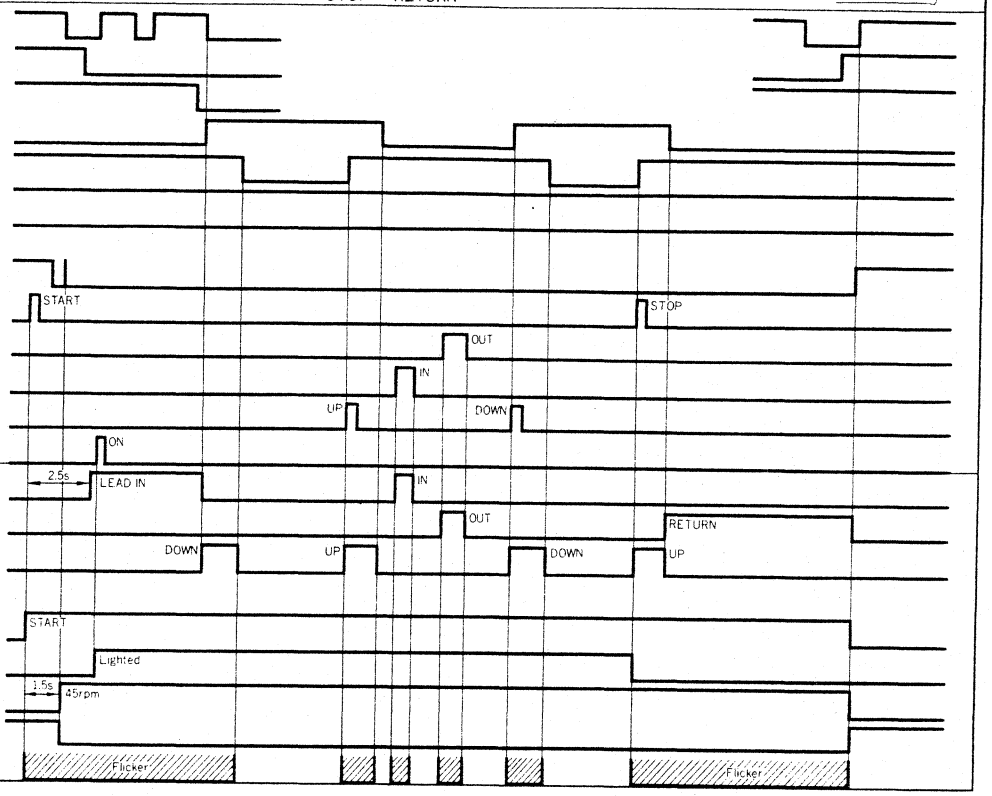
3-2. P-L40 Timing Chart

- **Timing chart 1**

MICRO COMPUTER μPD652C-049

AUTOMATC RECORD SIZE DETECTOR (17cm 45rpm)
17cm LEAD IN→REPEAT(ON)→PLAT→UP→MANUAL IN→
MANUAL OUT→DOWN→PLAY→STOP→RETURN

	INPUT/OUTPUT		PORT	PIN NO.
INPUT	SENSOR	A	D_0	6
		B	D_1	7
		C	D_2	8
		U	C_1	3
		D	C_2	4
		17cm	D_3	9
		30cm	INT	25
	PLL LOCK		C_3	5
	START/STOP SW		A_0	21
	MANUAL OUT SW		A_1	22
	MANUAL IN SW		A_2	23
	UP/DOWN SW		A_3	24
	REPEAT SW		C_0	2
OUTPUT	MICRO MOTOR(II) (IN,OUT)	CW	E_0	10
		CCW	E_1	11
	MICRO MOTOR(I) (LIFTER)	CW	E_2	12
		CCW	E_3	13
	DD MOTOR START/STOP		F_0	16
	REPEAT LED		F_1	17
	SPEED 33/45rpm		F_2	18
	SPEED (INVERCE)		F_3	19
	ARM MOVE LED		G_0	20

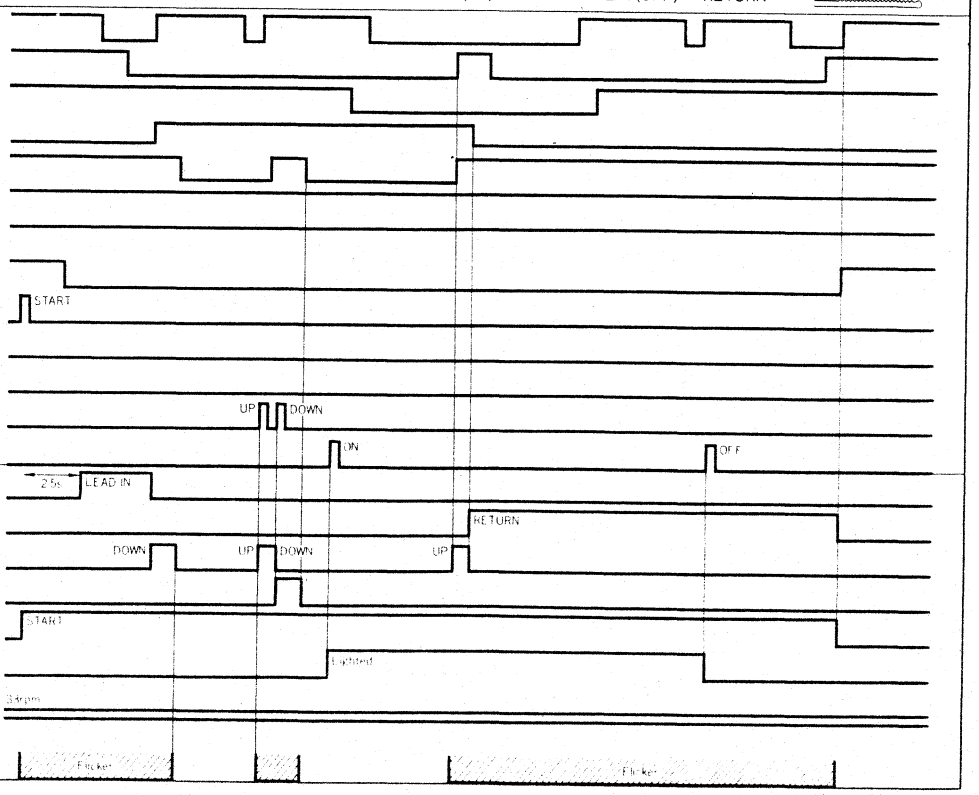


- **Timing chart 2**

MICRO COMPUTER μPD652C-049

AUTOMATC RECORD SIZE DETECTOR (30cm 33rpm)
30cm LEAD IN→PLAY→UP→DOWN→PLAY→REPEAT (ON)→END→REPEAT(OFF)→RETURN

	INPUT/OUTPUT		PORT	PIN NO.
INPUT	SENSOR	A	D_0	6
		B	D_1	7
		C	D_2	8
		U	C_1	3
		D	C_2	4
		17cm	D_3	9
		30cm	INT	25
	PLL LOCK		C_3	5
	START/STOP SW		A_0	21
	MANUAL OUT SW		A_1	22
	MANUAL IN SW		A_2	23
	UP/DOWN SW		A_3	24
	REPEAT SW		C_0	2
OUTPUT	MICRO MOTOR(II) (IN,OUT)	CW	E_0	10
		CCW	E_1	11
	MICRO MOTOR(I) (LIFTER)	CW	E_2	12
		CCW	E_3	13
	DD MOTOR START/STOP		F_0	16
	REPEAT LED		F_1	17
	SPEED 33/45rpm		F_2	18
	SPEED (INVERCE)		F_3	19
	ARM MOVE LED		G_0	20



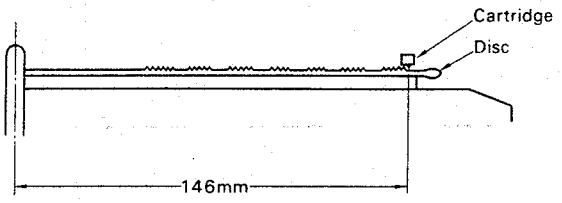
4. ADJUSTMENTS

Note: Before adjustments of 4-1 and 4-2, remove the arm rest only.

4-1. Adjustment of Automatic Disk Size Selection Operation (See Figs. 4-1, and 4-4)

1) By using 30 cm size record, actually carry out the automatic disk size operation (lead-in operation). Adjust the lead-in adjusting cam (See Fig. 4-4), so that the stylus tip may come down to the position (the lead-in groove position) 146 mm away from the disk center (See Fig. 4-1).
2) By using 17 cm size record, actually carry out the automatic disk size operation (lead-in operation). Confirm that the stylus tip may come down to the lead-in groove position.

Fig. 4-1



4-2. Adjustment of Automatic Music Selection Operation (See Figs. 4-2, 4-3 and 4-4)

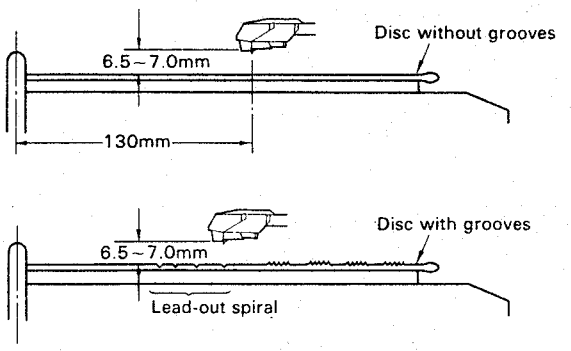
- **Required disc and measuring instruments**

1) Tester (DC voltmeter)
   Input impedance: 50kohm/V or more. (The higher, the better)
2) A vinyl chloride record disc without grooves or with wider lead-out spiral than usual.
3) A rule with graduation marks starting from the edge.

A. Tone Arm Height Adjustment

Adjust the height as shown in Fig. 4-2, by rotating the tone arm height adjusting screw (See Fig. 4-4) (Stop the stylus at a position about 130 mm away from the disk center.)

Fig. 4-2



B. Sensitivity adjustment of E sensor (P-L50)

1. Setting
   At the lifter-up position, in case of a record disc without grooves, stop the stylus at a position about 10 cm away from the disc center. In case of a record disc having grooves, stop the stylus lead-out spira.

2. How to adjust (See Fig. 4-3, Top View on Page 14)

a) Connect the DC voltmeter across the test terminal E and G (ground) and then adjust the voltage to DC 2.5 V by rotating the volume (fVR1) <E sensor adjustment>
b) Move the tone arm downward. (Check that the stylus stays on a lead-out spiral.)
c) Connect the DC voltmeter across test terminal F and G (ground) and then adjust the voltage to DC 2.5 V by rotating the volume (fVR2) <F sensor adjustment>

Fig. 4-3

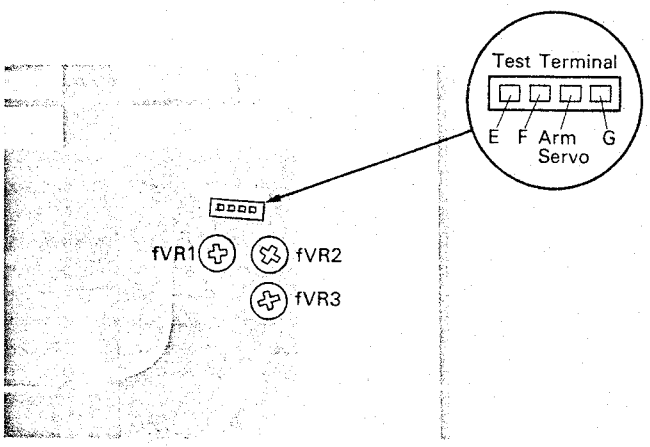
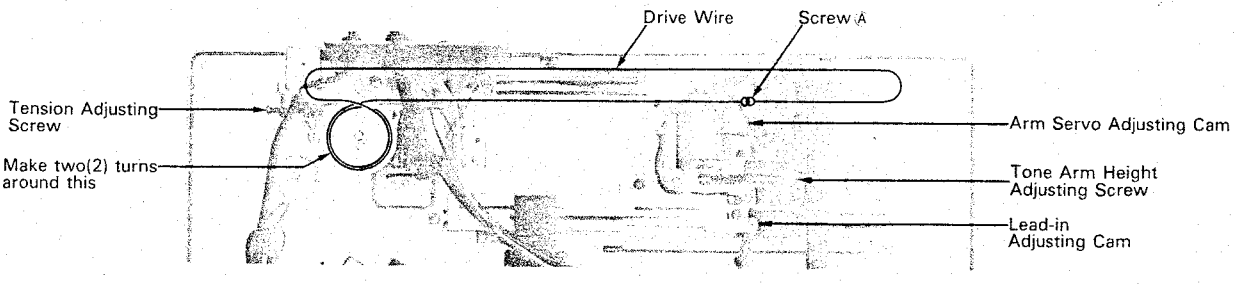


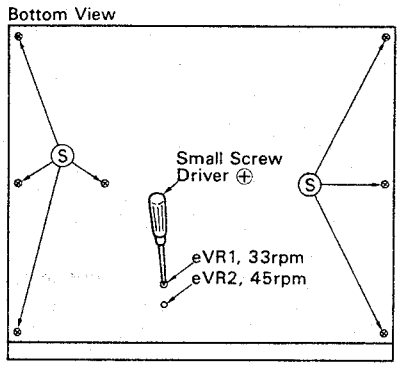
Fig. 4-4



4-3. Speed Adjustment

1-a) Set the Speed Selector to Normal.
1-b) Mount a 30 cm size record and push the start/stop switch.
1-c) Adjust eVR1 on the D.D. Motor Control Circuit Board (See 4-5) so as to standstill the strobo marking pattern.
2-a) Set the Speed Selector to Normal.
2-b) Mount a 17 cm size record and push the start/stop switch.
2-c) Adjust eVR2 on the D.D. Motor Control Circuit Board (See 4-5) so as to standstill the strobo marking pattern.
- Set eVR3 (S-0121) center position.

Fig. 4-5



4-4. Lateral-direction Adjustment of E and F Sensor (P-L50)

1. Setting
a) Mount a record disc in which many music groove.
b) Set the sensitivity selection switch to H when the music interval groove is narrow, and to M when medium.

2. How to adjust (See Figs. 4-6 and 4-7)
a) Push the music selection switch for the first music, and also the start/stop switch.
b) Immediately after the stylus begins to come down, move the arm by hand so that the stylus may trace the disc groove beginning from a position 2 mm or more outward from the lead-over groove about 70 mm away from the disc center.
c) Immediately after the above tracing, push the lifter switch twice. Be sure to push it with a time interval of 1 sec or more, because of a ready operation to receive F_2 signal.
Adjust the positions of E and F sensor by rotating the adjusting screws so that the muting switch can be turned ON (a click sound of relay action is heard) when the stylus has passed through the music interval groove. If the muting switch is turned ON earlier, rotate the adjusting screw clockwise to turn ON the switch later. (The thread pitch is 0.4 mm.)

Fig. 4-6

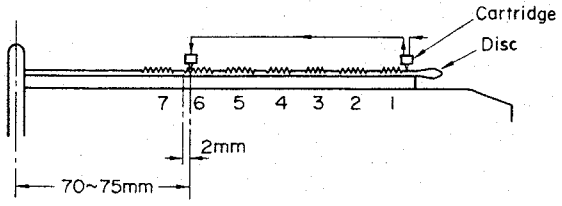
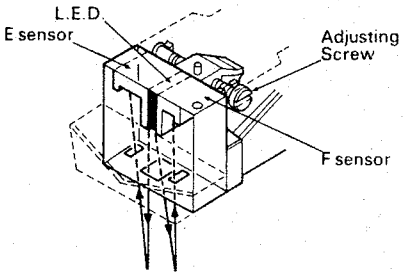


Fig. 4-7



4-5. Delay Adjustment of E_2 Signal (P-L50)

1. Setting
Use the record disk in which many musics (about seven music tracks) are recorded, and select three music tracks having lead-over grooves, respectively, near positions 70 mm, 100 mm, and 130 mm away from the disc center.

2. Adjustment (See Figs. 4-8 and 4-9, Top View on Page 14)
Perform the respective lead-in operations for three selected music tracks, and adjust the operations by rotating the volume (fVR3) as shown in Fig. 4-3 so that the stylus comes down on or a little before the lead-over grooves for the three music tracks. If the volume (fVR3) is rotated clockwise, the lift-down position of the stylus is shifted inward.
Note: In the lead-over grooves existing on a 70 mm-or-less from the center, the misplacing of the arm in detection position occurs inevitably.

Fig. 4-8

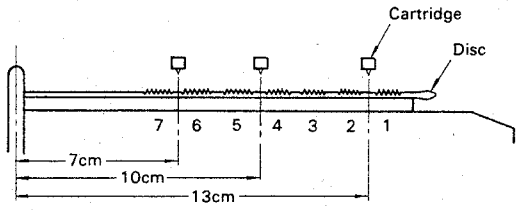
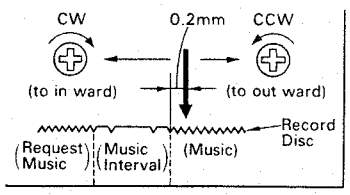


Fig. 4-9



Note: Remove the cabinet before adjustments of 4-6 and 4-7.

- **How to remove the cabinet. (See Top View on Page 13)**
1) Take off turntable sheet and turntable platter.
2) Remove the play case cover.
3) Loosen 2 screws in holes of top side.
4) Loosen 7 screws S to remove cabinet. (See Fig. 4-5)
5) Remove the cabinet upward slowly.
Note: Do not strike tone arm with the cabinet.

4-6. Arm Servo Signal Adjustment
(See Figs. 4-3, 4-10, 4-11)

1) Move the tone arm leftward and stop it within the record-playble range by depressing the MANUAL key
2) Connect the DC voltmeter shown in Fig. 4-10.
3) The tone arm servo level goes up more when the tone arm is moved rightward slightly by hand.
4) Adjust the voltage of "step 3)" to DC 4 ~ 4.5 V by rotating the volume (fVR6).
5) Connect the DC voltmeter across the test terminal arm servo and G (ground) and move the tone arm downward by depressing UP/DOWN key.
6) Adjust the arm servo adjusting cam so that the tone arm does not move in either direction, in the state where the tone arm is in the down position, then confirm that indication on DC voltmeter is within −IV ± IV.
7) Check that the tone arm will not move in either direction when the UP/DOWN key is depressed repeatedly, if necessary, rotating the volume (fVR6) slightly.

Fig. 4-10

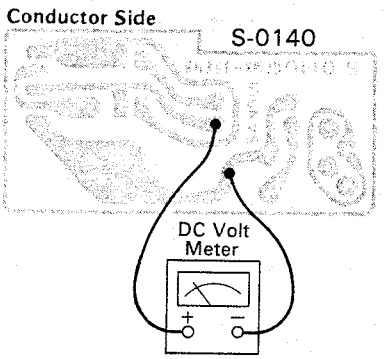
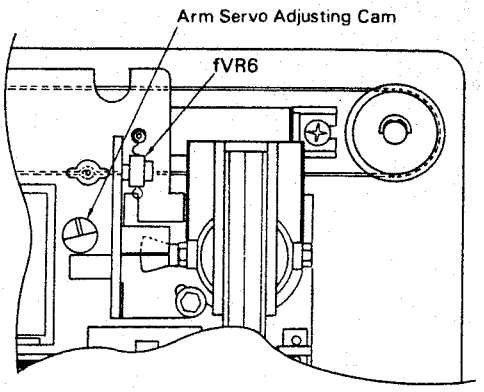


Fig. 4-11



4-7. Tension Adjustment of Tone Arm Driving Wire (See Fig. 4-4)

Move the tone arm by depressing the MANUAL key and adjust the tension adjusting screw so that the wire does not slip along the driving gear.

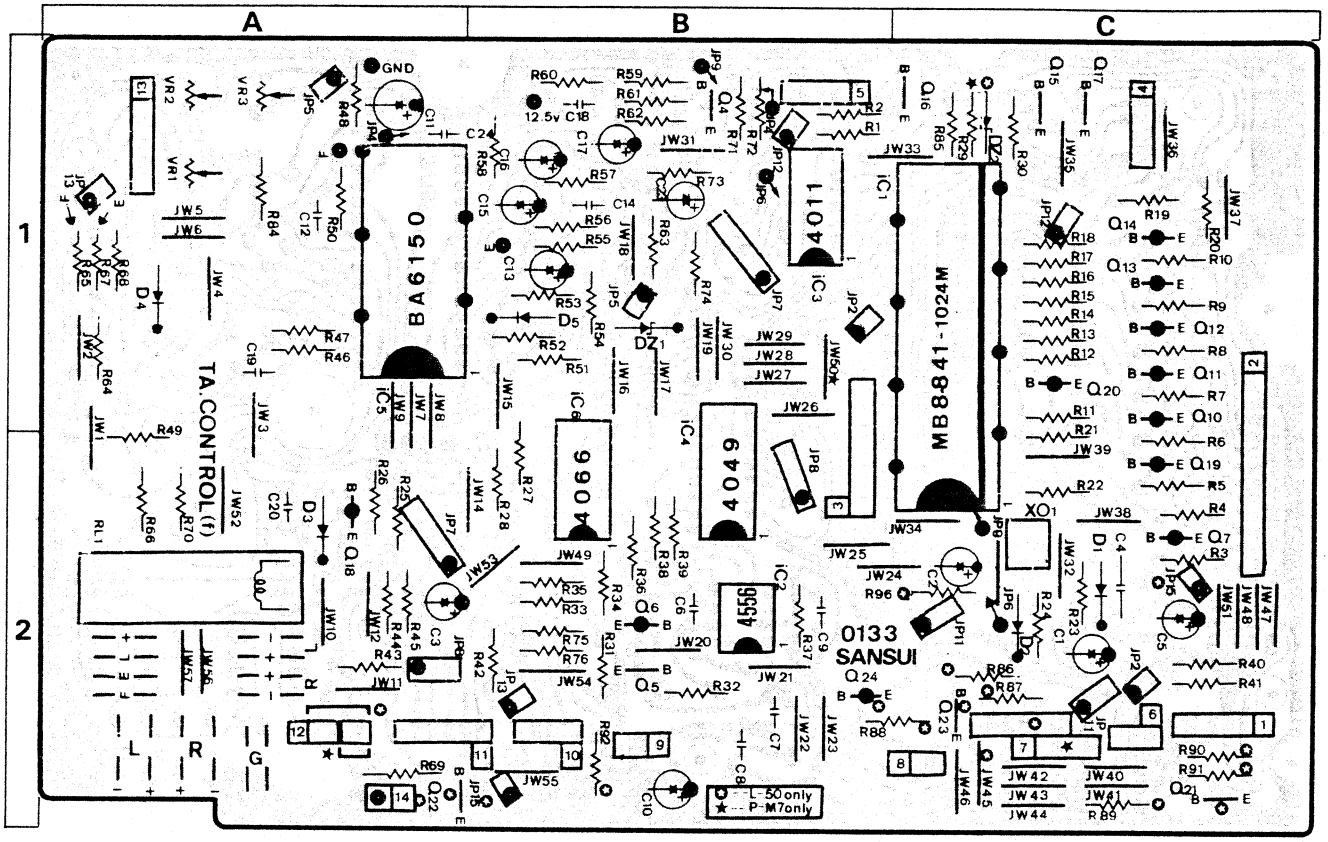
Note: Care must be taken to give too much tension.

5. PARTS LOCATION & PARTS LIST

5-1. S-0133 T.A. Control Circuit Board (Stock No. 13157501) <P-L50>

•Since some of capacitors and resistors are omitted from parts lists in this Service Manual, refer to the Common Parts List for capacitors & resistors, which was appended previously to Sansui Manual.

Component Side



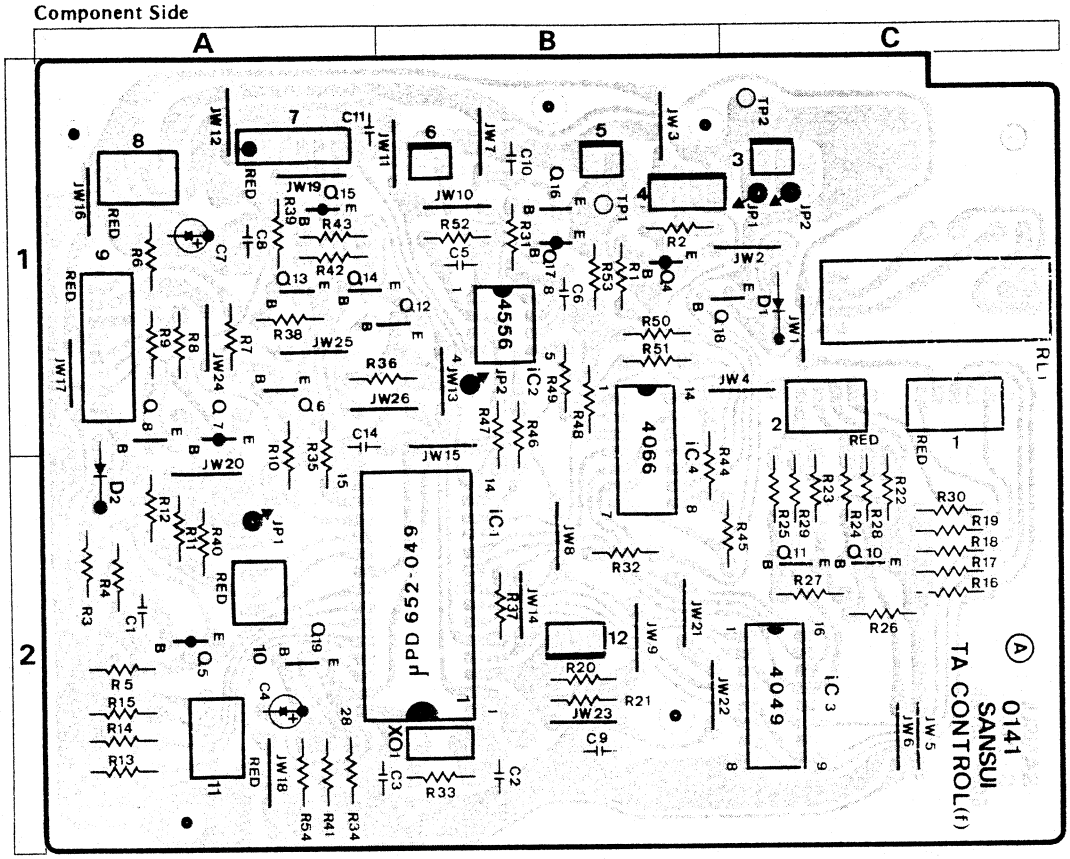
Parts List

Parts No.	Stock No.	Description
fXO1	46149200	KMFC-1001S
•Transistor		
fQ4	46367101	2SC2603
	or 46367301	2SC2458
	or 46367501	2SC945A
fQ5	07263501	2SD600
	or 46149401	2SD794
fQ6	07263401	2SB631
	or 46149301	2SB744
fQ7	46367001	2SA1115
	or 46367201	2SA1048
	or 46367401	2SA733A
fQ10~14	46367001	2SA1115
	or 46367201	2SA1048
	or 46367401	2SA733A
fQ15~17	46367101	2SC2603
	or 46367301	2SC2458
	or 46367501	2SC945A
fQ18~20	46367001	2SA1115
	or 46367201	2SA1048
	or 46367401	2SA733A
fQ21~23	46367101	2SC2603
	or 46367301	2SC2458
	or 46367501	2SC945A
fQ24	46367001	2SA1115
	or 46367201	2SA1048
	or 46367401	2SA733A
•IC		
fIC1	46371200	MB8841
fIC2	46160700	NJM4556
fIC3	03604000	MSM4011RS
	or 03604100	TC4011P
	or 07207200	MB84011BM

Parts No.	Stock No.	Description
fIC4	03611800	MSM4049RS
	or 46160400	MS84049B
fIC5	46321300	BA6150
fIC6	07264600	MSM4066RS
	or 46164300	MB84066B
•Diode		
fD1~5	03117600	1S2473D
•Zener Diode		
fDZ1	46113300	05Z10
fDZ2	46108700	05Z2.2
fR69	46230200	1kΩ 1/2W N.I.R.
•Capacitor		
fC4	07214600	0.15μF 25V C.C.
fC7, 8	07216200	0.022μF 25V C.C.
fC11	46407600	22μF 25V E.C.
fC13	46411200	2.2μF 50V E.C.
fC15	46411100	1μF 50V E.C.
fC16, 17	46407400	0.47μF 50V E.C.
fC19, 20	07211700	0.001μF 25V C.C.
fC24	07216200	0.022μF 25V C.C.
fVR1, 2	10351900	100kΩ (B) SVR, E·F Sensor Sensitivity adj.
fVR3	10352300	470kΩ (B) SVR, DELAY adj.
fRL1	46173300	Relay

5-2. S-0141 T.A. Control Circuit Board (Stock No. 13158501) <P-L40>

Component Side



Parts List

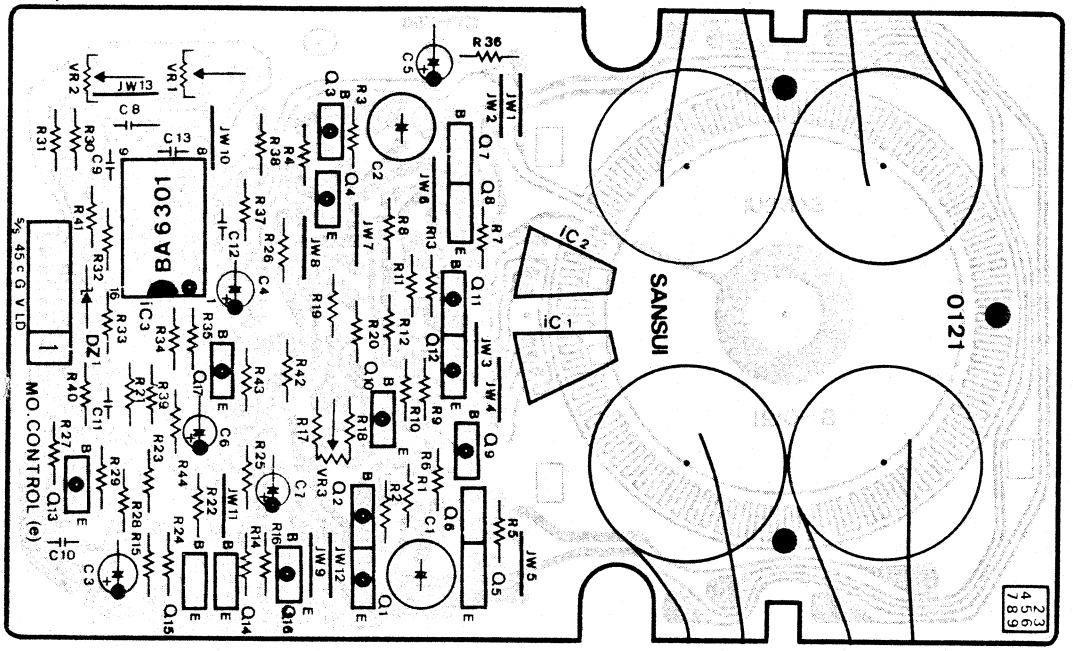
Parts No.	Stock No.	Description
●Transistor		
fQ4, 5, 7	46367001	2SA1115
	or 46367201	2SA1048
	or 46367401	2SA733A
fQ6, 8	46367101	2SC2603
	or 46367301	2SC2458
	or 46367501	2SC945A
fQ10~14	46367101	2SC2603
	or 46367301	2SC2458
	or 46367501	2SC945A
fQ15	46367001	2SA1115
	or 46367201	2SA1048
	or 46367401	2SA733A
fQ16	07263501	2SD600
	or 46149401	2SD794
fQ17	07263401	2SB631
	or 46149301	2SB744
fQ18, 19	46367101	2SC2603
	or 46367301	2SC2458
	or 46367501	2SC945A

Parts No.	Stock No.	Description
●IC		
fIC1	46371100	μPD652C-049
fIC2	46160700	NJM4556
fIC3	03611800	MSM4049RS
	or 46160400	MB84049B
fIC4	07264600	MSM4066RS
	or 46164300	MB84066B
fXO1	46396200	Ceramic Filter
●Diode		
fD1	03117600	1S2473D
●Capacitor		
fC1, 14	07216200	0.022μF 25V C.C.
fC2, 3	46137200	220pF 50V C.C.
fC8~11	07216200	0.022μF 25V C.C.
fRL1	46173300	Relay

• Note: The circuit boards, S-0121, S-0157, S-0158, S-0134, S-0135, S-0136, S-0137, S-0138, S-0139, S-0140, S-0142, S-0143, S-0144, S-0146, S-0147 & S-0163 are not supplied as the assembled. However, the individual parts on the circuit boards are provided orders.

5-3. S-0121 DD Motor Control Circuit Board <P-L50/L40>

Component Side



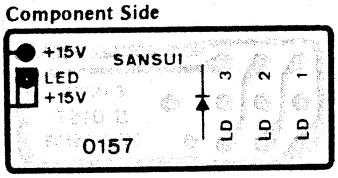
Parts List

Parts No.	Stock No.	Description
•Transistor		
eQ1	46359701	2SA952
eQ2	46359701	2SA952
eQ3	46359701	2SA952
eQ4	46359701	2SA952
eQ5	46359801	2SC2001
eQ6	46359801	2SC2001
eQ7	46359801	2SC2001
eQ8	46359801	2SC2001
eQ9	46367401	2SA733A
	or 46367001	2SA1115
	or 46367201	2SA1048
eQ10	46367401	2SA733A
	or 46367001	2SA1115
	or 46367201	2SA1048
eQ11	46367401	2SA733A
	or 46367001	2SA1115
	or 46367201	2SA1048
eQ12	46367401	2SA733A
	or 46367001	2SA1115
	or 46367201	2SA1048
eQ13	46367001	2SA1115
	or 46367201	2SA1048
eQ14	46367101	2SC2603
	or 46367301	2SC2458
eQ15	46367101	2SC2603
	or 46367301	2SC2458
eQ16	46149301	2SB744
eQ17	46367001	2SA1115
	or 46367201	2SA1048

Parts No.	Stock No.	Description
•IC		
eIC1	46354301	H-300BC
eIC2	46354301	H-300BC
eIC3	46354400	BA6301
•Zener Diode		
eDZ1	46113900	05Z12
eR41	00205500	240kΩ 1/4W M.R.
eC1	08451100	22μF 16V E.B.
eC2	08451100	22μF 16V E.B.
eC10	07216600	47000pF 25V C.C.
eC11	07216600	47000pF 25V C.C.
eC12	07211700	1000pF 25V C.C.
eC13	07211700	1000pF 25V C.C.
eVR1	46366600	100kΩ (B) S.V.R., 33 r.p.m.
eVR2	07241700	200kΩ (B) S.V.R., 45 r.p.m.
eVR3	07241000	1kΩ (B) S.V.R., Wow and flutter

5-4. S-0157 A, B, C Sensor L.E.D. Circuit Board <P-L50/L40>

Component Side

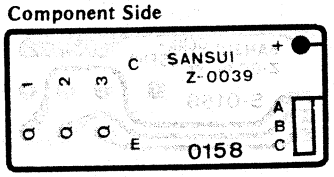


Parts List

Parts No.	Stock No.	Description
fLD1~3	46150400	LED TLR-121

5-5. S-0158 A, B, C Sensor Photo TR Circuit Board <P-L50/L40>

Component Side

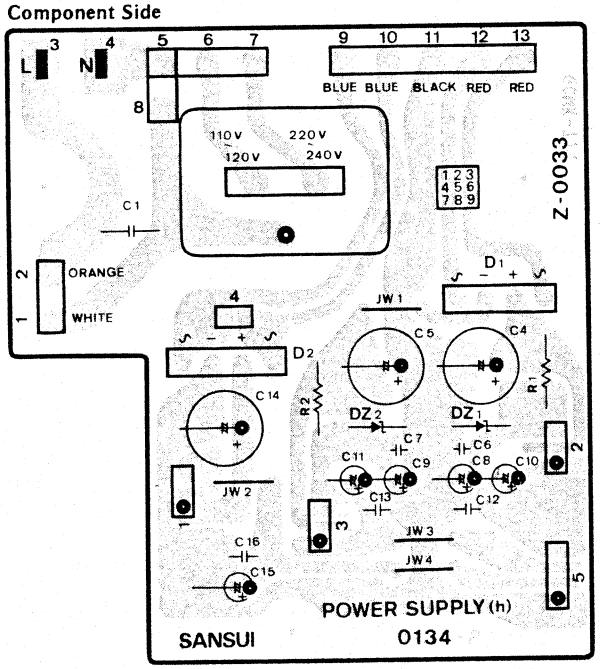


Parts List

Parts No.	Stock No.	Description
•Photo Transistor		
fQ1~3	46160000	TPS605

5-6. S-0134 Power Supply Circuit Board <P-L50/L40>

Component Side

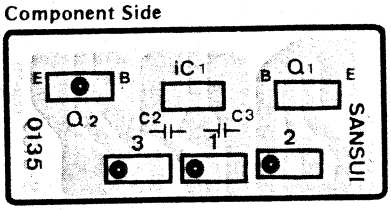


Parts List

Parts No.	Stock No.	Description
•Diode		
hD1, 2	03117000	RB-152
•Zener Diode		
hDZ1, 2	46104500	05Z16-X
•Resistor		
hR1, 2	46230200	1kΩ 1/2W N.I.R.
•Capacitor		
hC1	46425800	0.01μF 400V C.C.
hC6, 7	07213200	0.01μF 25V C.C.

5-7. S-0135 Voltage Control TR Circuit Board <P-L50/L40>

Component Side

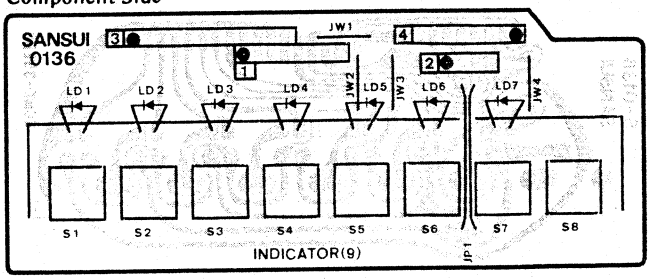


Parts List

Parts No.	Stock No.	Description
•Transistor		
hQ1	03083902	2SD313
hQ2	46149301	2SB744
•IC		
hIC1	07183500	μPC78M05H
	or 46144200	NJM78M05A
•Capacitor		
hC2, 3	07214000	0.047μF 25V C.C.

5-8. S-0136 PROGRAM Switch & Indicator Circuit Board <P-L50>

Component Side

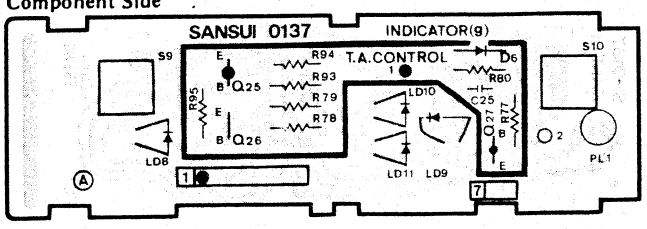


Parts List

Parts No.	Stock No.	Description
gLD1~7	07250900	LED TLG-123
gSW1~8	46395900	Push SW., RANDOM ACCESS PROGRAM

5-9. S-0137 Control Switch & Indicator Circuit Board <P-L50>

Component Side



Parts List

Parts No.	Stock No.	Description
•Transistor		
fQ25, 26	07194801	2SC1815
	or 03059501	2SC945
	or 07299701	2SC2603
fQ27	07194701	2SA1015
	or 07197001	2SA733
	or 07299601	2SA1115
fC25	07213600	0.022μF 25V C.C.

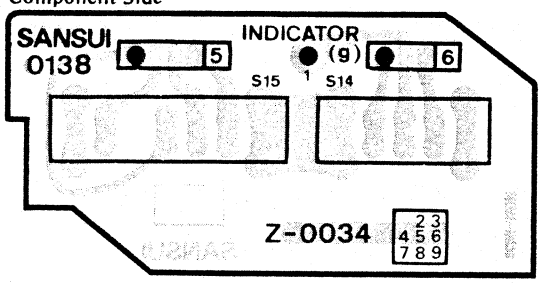
to be continued▶

Parts List <S-0137>

Parts No.	Stock No.	Description
•LED		
gLD8, 10, 11	46095200	LED TLR-123
gLD9	07250900	LED TLG-123
gPL1	46438300	Lamp, 12V 0.1A
gSW9, 10	46395900	Push SW., START/STOP, REPEAT

5-10. S-0138 SPEED & SENSITIVITY Switch Circuit Board <P-L50>

Component Side

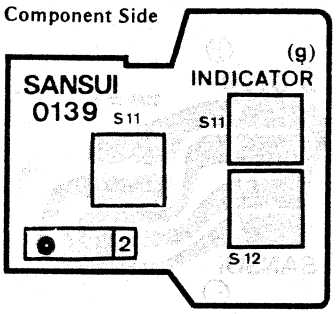


Parts List

Parts No.	Stock No.	Description
gSW14	07249800	Slide SW., SPEED
gSW15	07249900	Slide SW., SENSITIVITY

5-11. S-0139 T.A. Control Switch Circuit Board <P-L50>

Component Side

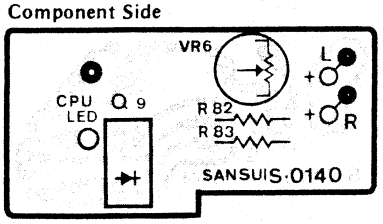


Parts List

Parts No.	Stock No.	Description
gSW11~13	46371600	Push SW., UP/DOWN, MANUAL

5-12. S-0140 Arm Servo Circuit Board <P-L50/L40>

Component Side

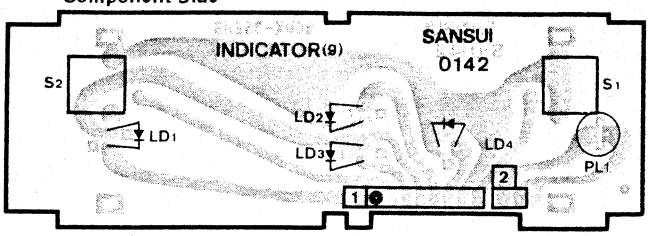


Parts List

Parts No.	Stock No.	Description
vVR6	10351300	10kΩ (B) SVR,
fQ9	46395800	Photo Coupler, GP-LS04

5-13. S-0142 Control Switch & Indicator Circuit Board <P-L40>

Component Side

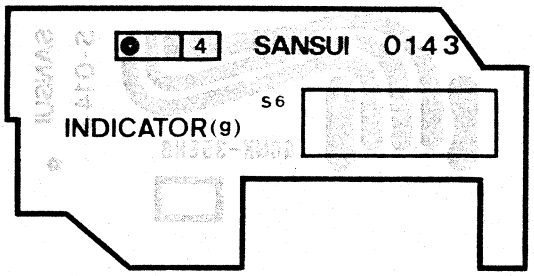


Parts List

Parts No.	Stock No.	Description
gLD1, 3, 4	46095200	LED TLR123
gLD2	07250900	LED TLG123
gPL1	46438300	Lamp, 12V 0.1A
gSW1, 2	46395900	Push SW., START/STOP, REPEAT

5-14. S-0143 SPEED Switch Circuit Board <P-L40>

Component Side

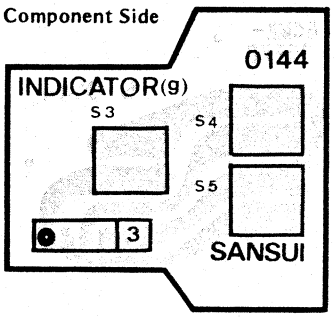


Parts List

Parts No.	Stock No.	Description
gSW14	07249800	Slide SW., SPEED

5-15. S-0144 T.A. Control Switch Circuit Board <P-L40>

Component Side

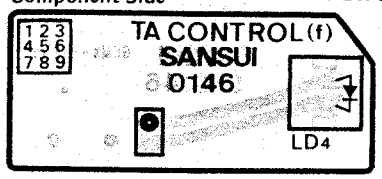


Parts List

Parts No.	Stock No.	Description
gSW11~13	46371600	Push SW., UP/DOWN, MANUAL

5-16. S-0146 Record Size Sensor L.E.D. Circuit Board <P-L40>

Component Side

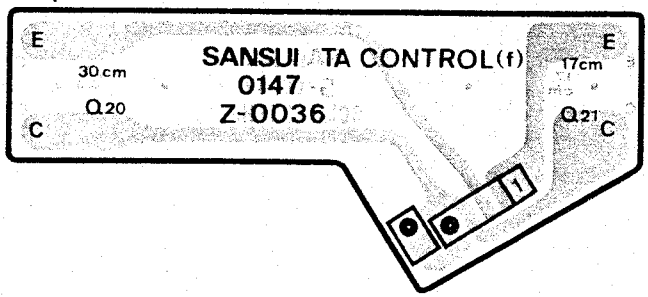


Parts List

Parts No.	Stock No.	Description
fLD4	46396000	LED GL-520

5-17. S-0147 Record Size Sensor Circuit Board

Component Side <P-L40>



Parts List

Parts No.	Stock No.	Description
•Photo Transistor		
fQ20, 21	03900100	PH101

5-18. S-0163 CPU Indicator Circuit Board <P-L40>

Parts List

Parts No.	Stock No.	Description
gLD5	46150400	LED TLR-121

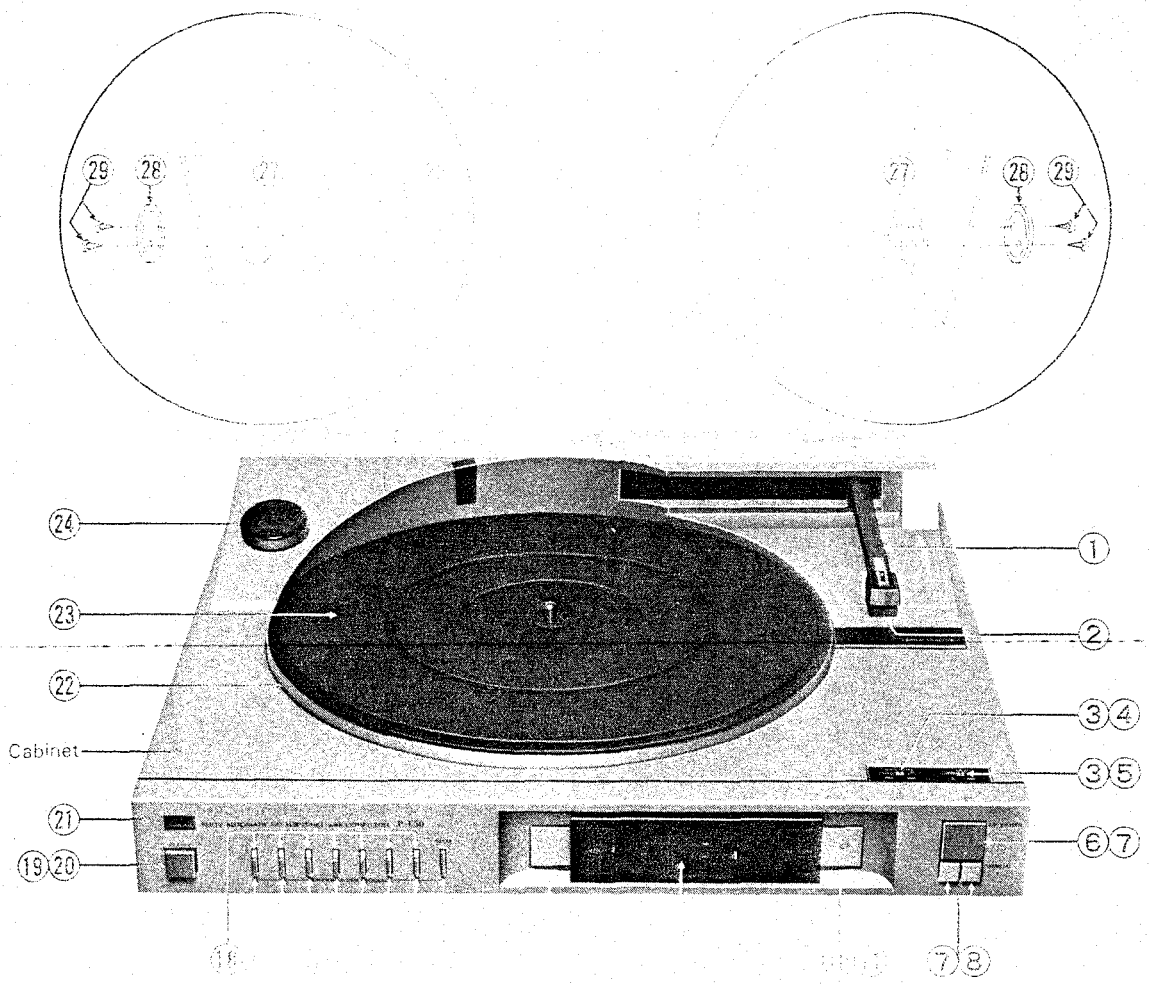
• Abbreviations

C.R. : Carbon Resistor
S.R. : Solid Resistor
Ce.R. : Cement Resistor
M.R. : Metal Film Resistor
F.R. : Fusing Resistor
N.I.R. : Non-Inflammable Resistor
C.C. : Ceramic Capacitor
C.T. : Ceramic Capacitor, Temperature Compensation
E.C. : Electrolytic Capacitor
E.L. : Low Leak Electrolytic Capacitor
E.B. : Bi-Polar Electrolytic Capacitor
E.BL. : Low Leak Bi-Polar Electrolytic Capacitor
Ta.C. : Tantalum Capacitor
F.C. : Film Capacitor
M.P. : Metalized Paper Capacitor
P.C. : Polystyrene Capacitor
G.C. : Gimmic Capacitor
V.R. : Variable Resistor
S.V.R. : Semi Variable Resistor
S.W. : Switch

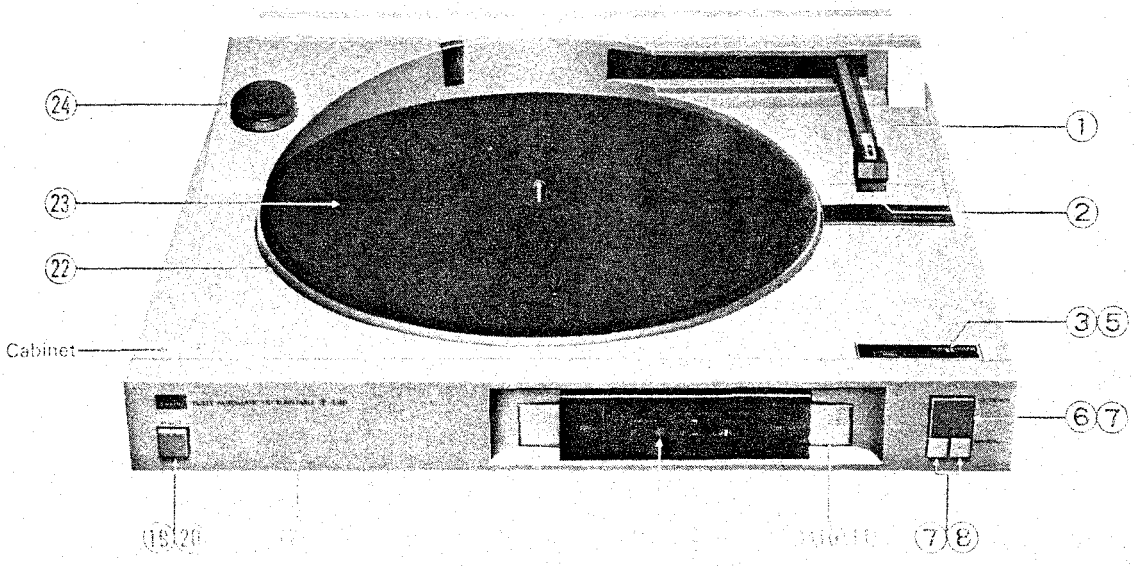
6. OTHER PARTS

6-1. Front View

A) P-L50



B) P-L40



Parts List <Front View> (P-L50/L40)

Parts No.	Stock No.	Description
<Common Parts>		
1	18037700	Tone Arm Ass'y with Cartridge SV-S505 (P-L40)
	18037600	Tone Arm Ass'y with Cartridge SV-S505 & Sensor (P-L50)
2	13197200	Stylus, SN-S505
3	13141600	Slide Knob, SPEED, SENSITIVITY
4	07249900	Slide SW., SENSITIVITY (P-L50)
5	07249800	Slide SW., SPEED
7	46371600	Push SW., UP/DOWN, MANUAL
*9	07926600	Push Knob, START/STOP
*10	07962600	Cushion
11	46395900	Push SW., START/STOP, REPEAT, RANDAM ACCESS PROGRAM, CLEAR
*14	13166400	Display Case Cover
*15	07926500	Push Knob, REPEAT
18	07931700	Indicator, RANDAM ACCESS PROGRAM
20	46364300	Push SW., POWER
22	13143800	Turntable Platter (P-L40)
	13159700	Turntable Platter (P-L50)
23	13146700	Turntable Sheet (P-L40)
	13099110	Turntable Sheet (P-L50)
24	13012300	EP Adaptor
	13145100	Insulator
25	13187200	Side Hinge (L)
26	13187300	Side Hinge (R)

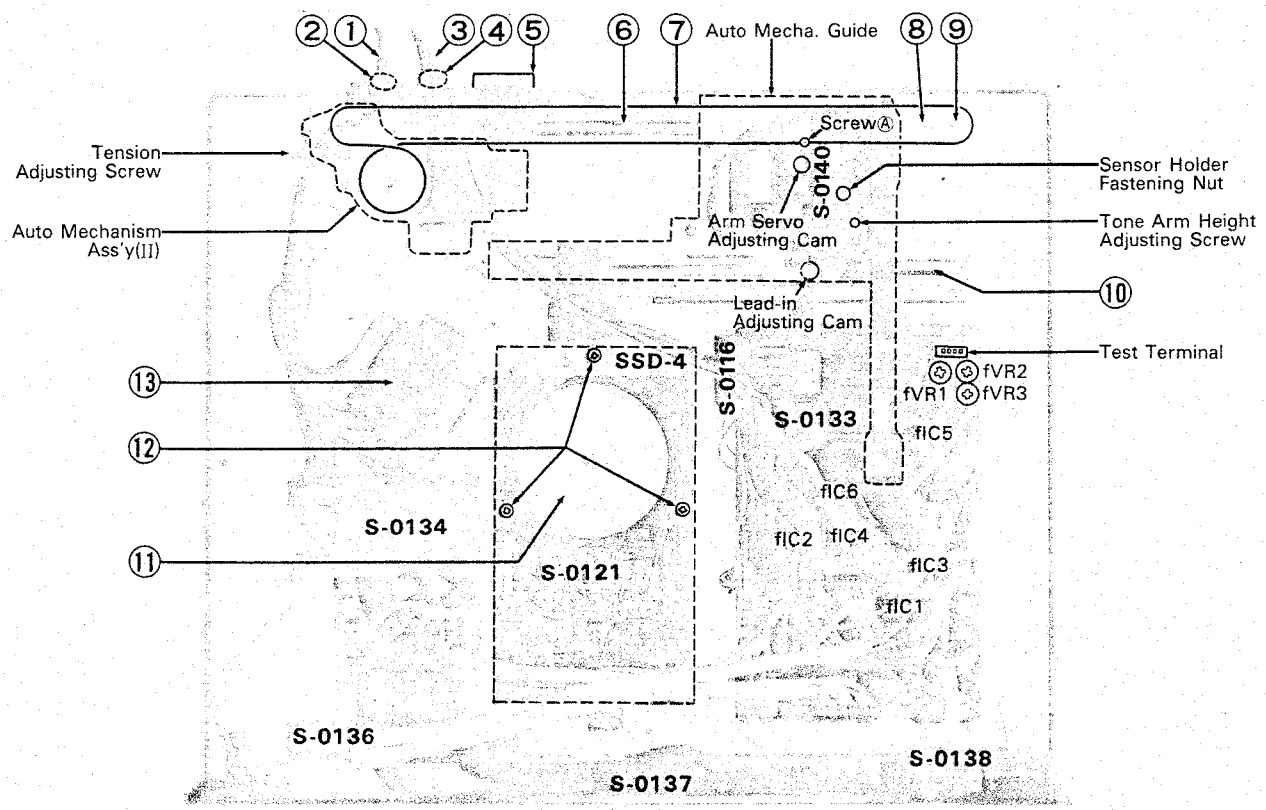
13037960 Prism

Parts No.	Stock No.	Description
<Silver Model>		
6	13139700	Push Knob, UP/DOWN
8	13139500	Push Knob, MANUAL
*12	13175300	Display Holder
*13	13146100	Display Plate
16	07930900	Push Knob, CLEAR (P-L50)
17	07931100	Push Knob, RANDAM ACCESS PROGRAM (P-L50)
19	07971210	Push Knob, POWER
21	13155300	Front Panel (P-L40)
	13155100	Front Panel (P-L50)
27	13163000	Dust Cover Ass'y
28	13113800	Hinge Cap
29	13115100	Screw, M2.6 x 8
<Black Model>		
6	13139800	Push Knob, UP/DOWN
8	13139600	Push Knob, MANUAL
*12	13145800	Display Holder
*13	13169300	Display Plate
16	07931000	Push Knob, CLEAR (P-L50)
17	07931200	Push Knob, RANDAM ACCESS PROGRAM (P-L50)
19	07911210	Push Knob, POWER
21	13155400	Front Panel (P-L40)
	13155200	Front Panel (P-L50)
27	13163100	Dust Cover Ass'y
28	13187400	Hinge Cap
29	13187500	Screw, M2.6 x 8

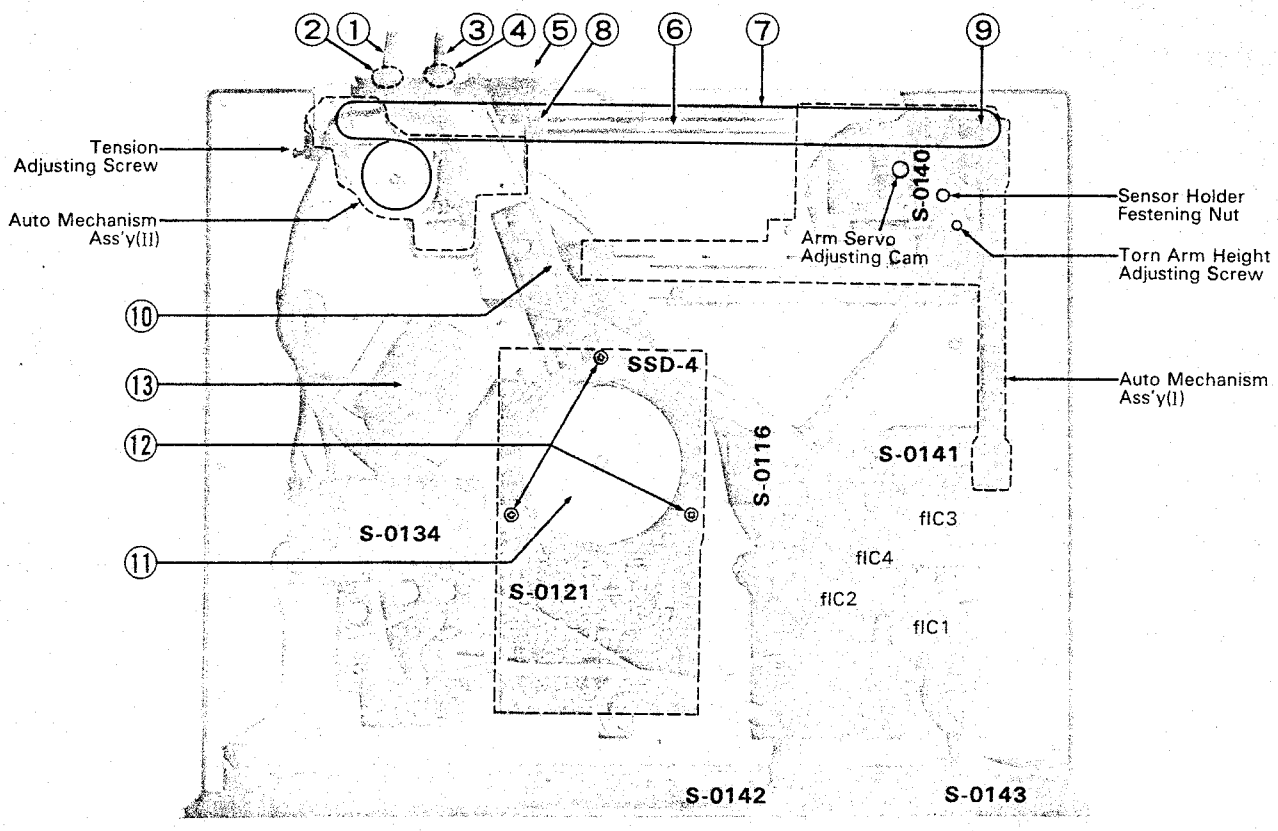
• NOTE: The mark "*" parts are shown in Fig. 6-1.

6-2. Top View

A) P-L50



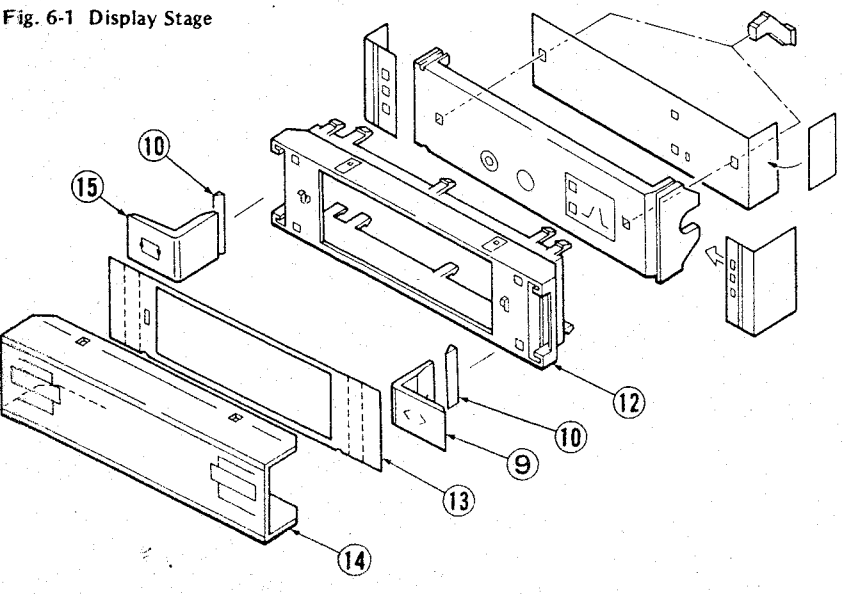
B) P-L40



Parts List <Top View> (P-L50/L40)

Parts No.	Stock No.	Description
1	46413200	Power Supply Cord (XX, CSA)
	38004700	Power Supply Cord (UL)
	38004500	Power Supply Cord (EU)
	38004300	Power Supply Cord (BS)
	07204200	Power Supply Cord (AS)
2	39106000	Strain Relief (XX, UL, CSA)
	39104900	Strain Relief (EU, BS, AS)
3	13154300	P.U. Output Cord
4	39105700	Strain Relief (P.U. Cord)
5	46170400	Jack, COMPU-SELECTOR, COMPU-EDITING
6	13145200	Pipe (short)
7	13138100	Drive Wire
8	13106200	Pipe Holder
9	13098300	Pulley (B)
10	13145300	Pipe (long)
11	18032300	DD Motor with Control Circuit Board (S-0121)
12	08320700	Screw, M4 x 12
13	15008301	Power Transformer (XX)
	15008302	Power Transformer (UL, CSA)
	15008305	Power Transformer (EU, BS, AS)

Fig. 6-1 Display Stage



● Note:

As to UL, CSA, BS, ES, AS and xx marked in the Parts Lists, note the followings:

UL, CSA . . Parts used in the unit which is applicable to the USA and Canada under industrial standards.

BS . . . . . Parts used in the unit which is applicable to British under industrial standards.

EU . . . . . Parts used in the unit which is applicable to Sweden, Denmark, Norway, Finland, West Germany, and Switzerland under industrial standards.

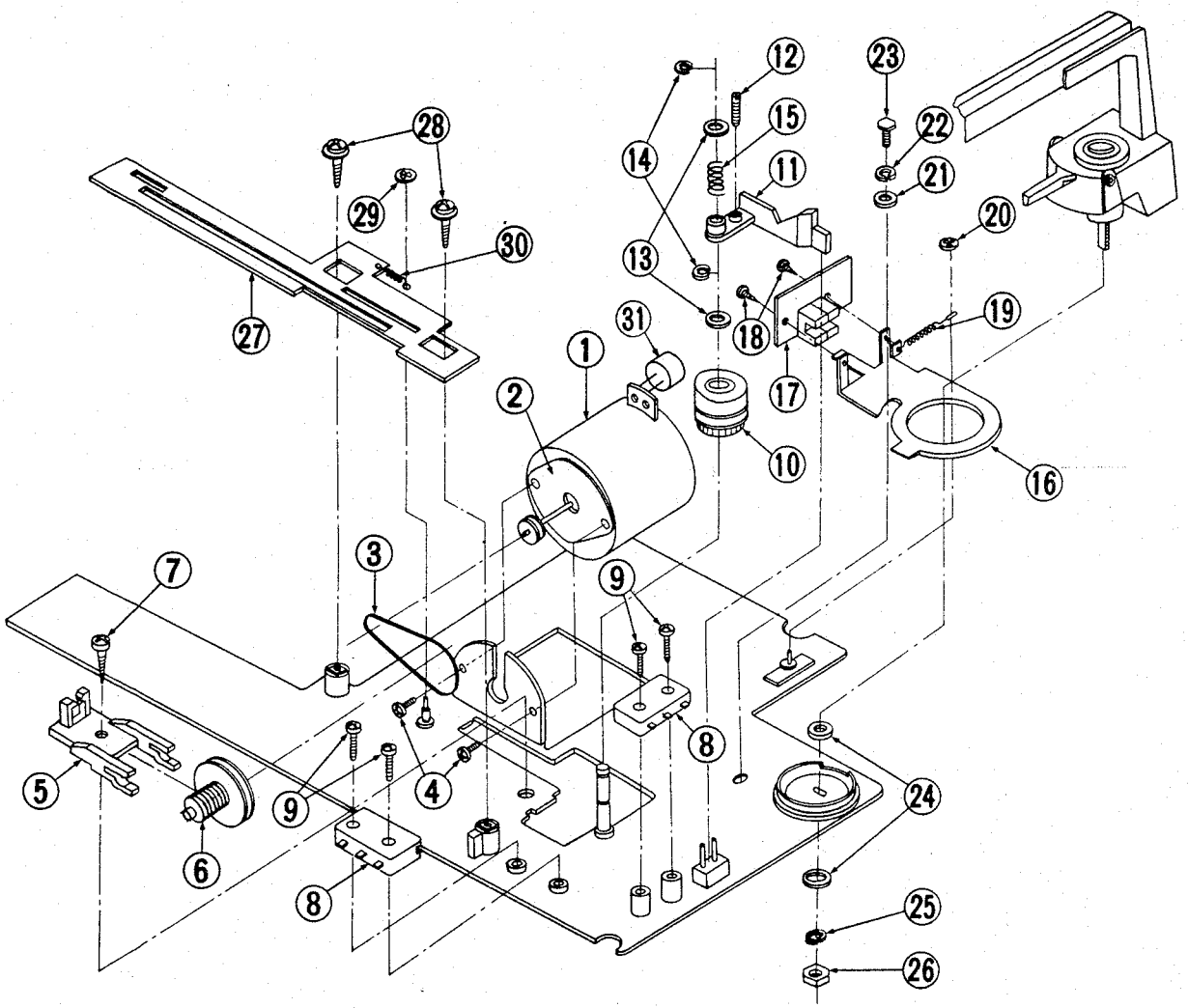
AS . . . . . Parts used in the unit which is applicable to Australia under industrial standards.

XX . . . . . Parts used in the unit which is applicable to other counteries excepting mentioned above.

* In this parts list, those parts with no above mark in the place of Description are all the sames as XX marked parts.

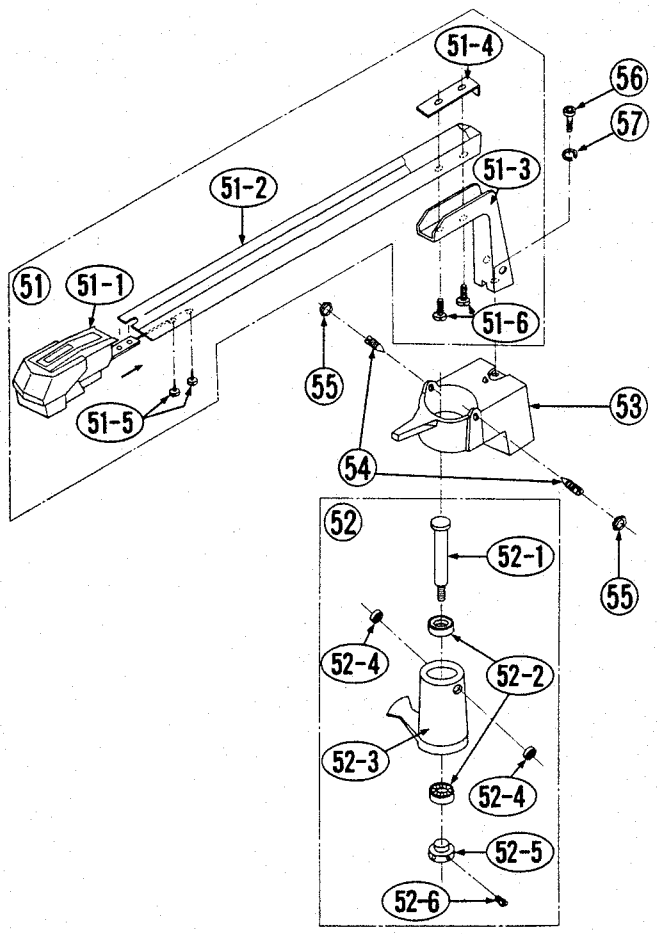
7. EXPLODED VIEW OF MECHANISM Ass'y & PARTS LIST

7-1. Auto Mechanism Ass'y (I)

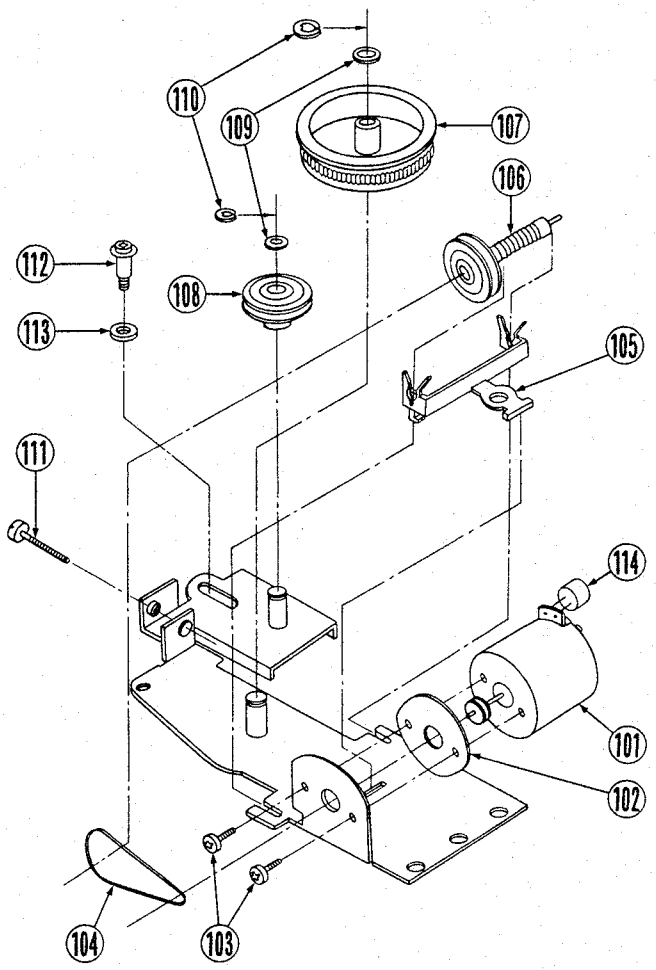


Parts List <Auto Mechanism Ass'y (I)>

Parts No.	Stock No.	Description
1	46176300	Micro Motor 3634 4500
2	55029810	Rubber Cushion
3	13103800	Belt (B)
4	00436500	Pan Head Screw, M2 x 4
5	13098110	Shaft Guide (B)
6	13134200	Warm Shaft Ass'y (B)
7	13122300	Binding Head Deltite Screw, M3 x 6
8	11602700	Micro Switch
9	13127800	Binding Head Tapping Screw, M2 x 12
10	13103710	Lifter Cam
11	13098910	Lifter Plate
12	13115200	Slot Type Set Screw, M3 x 10
13	51825000	Thrust Washer, FT3
14	00489000	E Type Washer, D2
15	13111600	Compression Spring
16	13097810	Sensor Holder
17	———	Sensor Circuit Board, S-0140
18	00421300	Pan Head Screw M2.6 x 6
19	13111500	Tension Spring (2)
20	51830000	CS-Type Washer, M2
21	00466500	Plane Washer, M4
22	00469700	Spring Washer, M3
23	51626500	Hexagon Head Screw, M3 x 6
24	00466700	Plane Washer, M4
25	00469800	Spring Washer, M4
26	00463800	Hexagon Nut, M4
27	13137900	Position Guide
28	51625100	Pan Head Tapping Screw, M3 x 8
29	13111400	Tension Spring (1)
30	51830000	CS-Type Washer, M2
31	00305600	22μF 25V E.B.



7-2. Auto Mechanism Ass'y (II)



Parts List <Auto Mechanism Ass'y (I)>

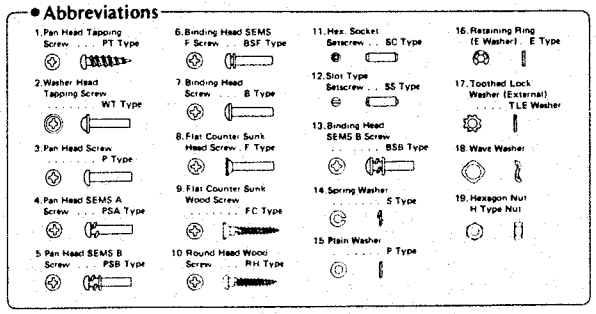
Parts No.	Stock No.	Description
51	18037600	Tone Arm Ass'y (P-L50)
	18037700	Tone Arm Ass'y (P-L40)
51-1	———	Cartridge, SV-505 with sensor
51-2	———	Pipe
51-3	———	Pipe Holder
51-4	———	GND Rag
51-5	———	Pan Head Tapping Screw, M2 x 4
51-6	———	Pan Head Screw, M2 x 4
52	18026501	Arm Shaft Bearing Ass'y
52-1	———	Arm Shaft Bearing
52-2	———	Radial Bearing
52-3	———	Arm Bearing
52-4	———	Pivot Bearing
52-5	———	Holder Ring
52-6	———	Slot Type Set Screw, M2.5 x 2.5
53	13096700	Holder Weight
54	13114100	Pivot
55	00463600	Hexagon Nut, M3
56	13127200	Hexagon Socket Head Screw, M3 z 10
57	00469700	Spring Washer, M3

Note: Parts without Stock Nos. are not supplied even parts name are listed in the parts list.

Parts List <Auto Mechanism Ass'y (II)>

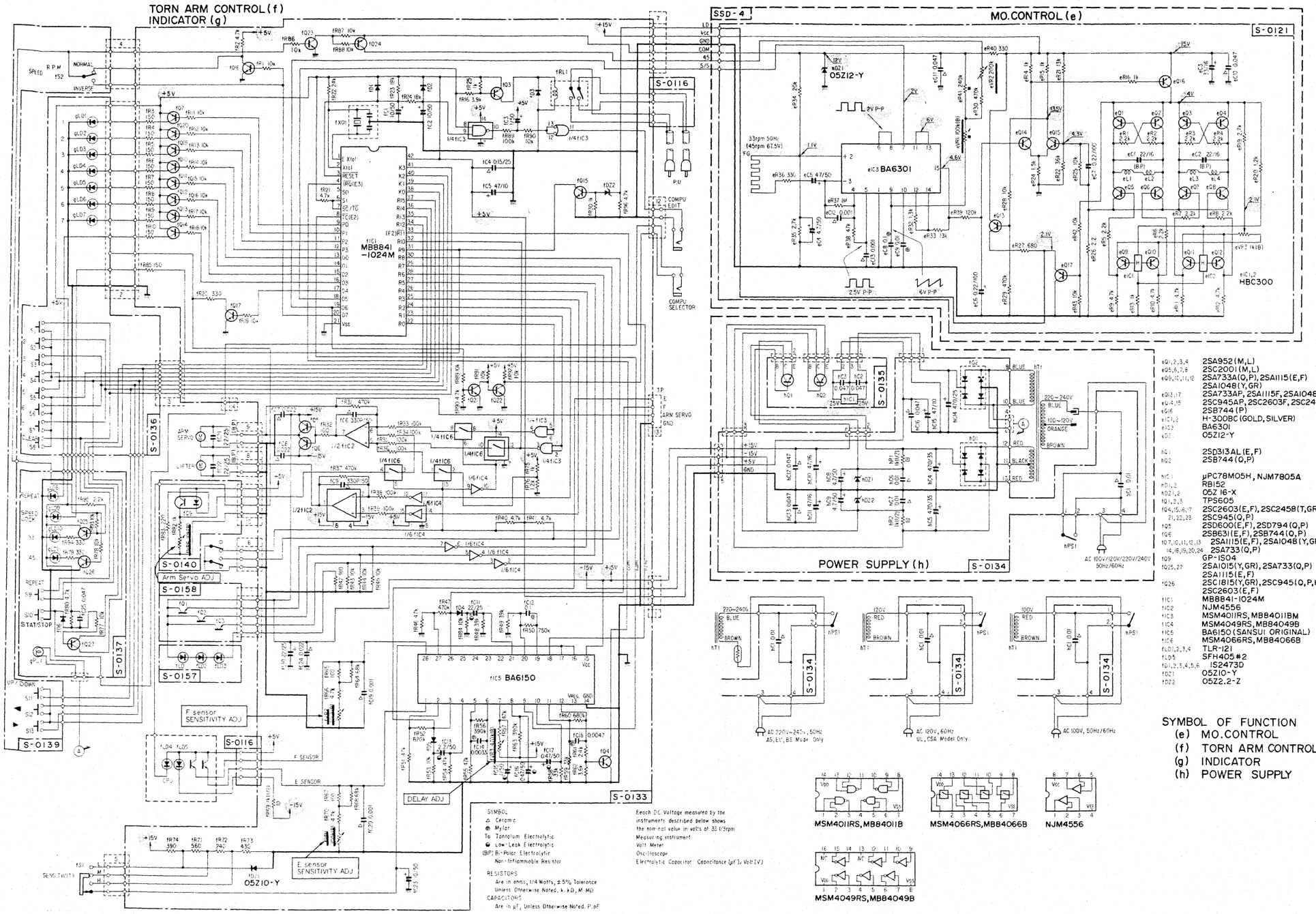
Parts No.	Stock No.	Description
101	46176300	Micro Motor 3634 4500
102	55029810	Rubber Cushion
103	00436500	Pan Head Screw, M2 x 4
104	60322310	Belt (A)
105	13098400	Warm Shaft Guide (A)
106	13134100	Warm Shaft Ass'y (A)
107	13098500	Driver Gear
108	13098300	Pulley (B)
109	51822600	Thrust Washer, FT4
110	00489200	E Type Washer, D3
111	00437600	Pan Head Screw, M3 x 20
112	13112800	Flanged Screw, M3
113	00466700	Plane Washer, M4
114	00305600	22μF 25V E.B.

• Abbreviations



8. SCHEMATIC DIAGRAM 8-1. P-L50

*Design and specifications subject to change without notice for improvement.
*La présention et les specifications sont susceptibles d'être modifiées sans préavis par suites d'améliorations eventuelles.
*Anderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



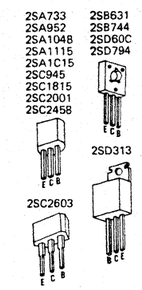
SYMBOL
△ Ceramic
◉ Mylar
To Tantalum Electrolytic
● Low-Leak Electrolytic
(BP) Bi-Polar Electrolytic
Non-Inflammable Resistor

RESISTORS
Are in ohms, 1/4 Watts, ±5% Tolerance
Unless Otherwise Noted, k:kΩ, M:MΩ
CAPACITORS
Are in pF, Unless Otherwise Noted. P:pF

Eeach DC Voltage measured by the instruments described below shows the nominal value in volts of 33 1/3rpm.
Measuring instrument
Volt Meter
Oscilloscope
Electrolytic Capacitor: Capacitance (μF): Volt (V)

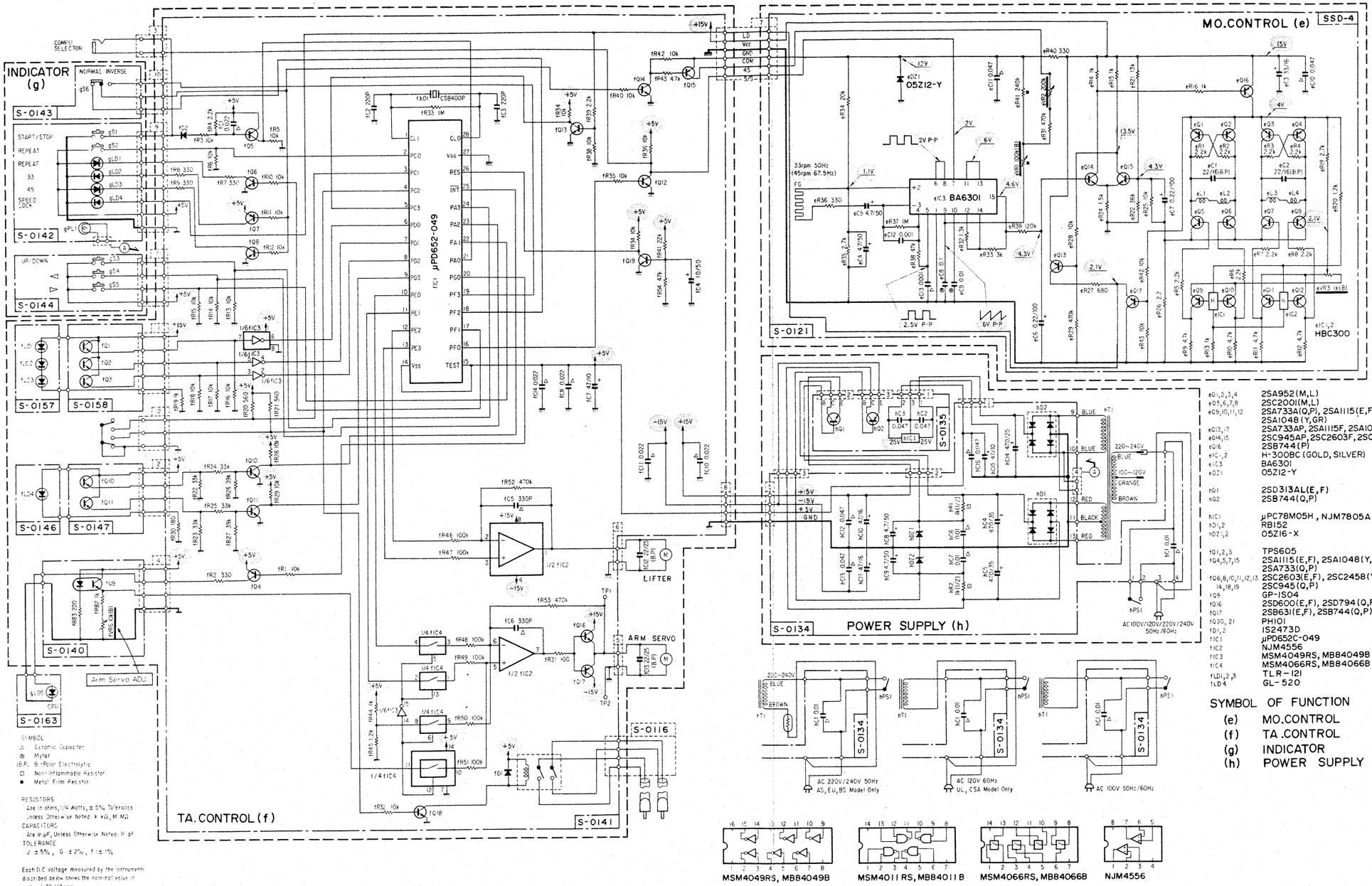
eQ1,2,3,4	2SA952(M,L)
eQ5,6,7,8	2SC2001(M,L)
eQ9,10,11,12	2SA733A(O,P), 2SA1115(E,F)
	2SA1048(Y,GR)
eQ13,17	2SA733AP, 2SA1115F, 2SA1048GR
eQ14,15	2SC945AP, 2SC2603F, 2SC2458GR
eQ16	2SB744(P)
eIC1,2	H-300BC(GOLD, SILVER)
eIC3	BA6301
eDZ	05Z12-Y
hQ1	2SD313AL(E,F)
hQ2	2SB744(Q,P)
hIC1	μPC78M05H, NJM7805A
hDI1,2	RB152
hDZ1,2	05Z 16-X
hQ1,2,3	TPS605
fQ4,15,16,17 21,22,23	2SC2603(E,F), 2SC2458(T,GR) 2SC945(Q,F)
fQ5	2SD600(E,F), 2SD794(Q,P)
fQ6	2SB631(E,F), 2SB744(Q,P)
fQ7,10,11,12,13 14,18,19,20,24	2SA1115(E,F), 2SA1048(Y,GR) 2SA733(Q,P)
fQ9	GP-1S04
fQ25,27	2SA1015(Y,GR), 2SA733(Q,P) 2SA1115(E,F)
fQ26	2SC1815(Y,GR), 2SC945(Q,P,K) 2SC2603(E,F)
fIC1	MB8841-1024M
fIC2	NJM4556
fIC3	MSM4011RS, MB84011BM
fIC4	MSM4049RS, MB84049B
fIC5	BA6150(SANSUI ORIGINAL)
fIC6	MSM4066RS, MB84066B
fLD1,2,3,4	TLR-121
fLD5	SFH405#2
fDI1,2,3,4,5,6	1S2473D
fDZ1	05Z10-Y
fDZ2	05Z2.2-Z

SYMBOL OF FUNCTION
(e) MO.CONTROL
(f) TORN ARM CONTROL
(g) INDICATOR
(h) POWER SUPPLY



8-2. P-L40

*Design and specifications subject to change without notice for improvement.
*La présention et les specifications sont susceptibles d'être modifiees sans préavis par suites d'améliorations éventuelles.
*Anderungen, die dem technischen Fortschritt dienen, bleiben vorbehalten.



SYMBOL
△ Ceramic Capacitor
Ⓜ Mylar
(E.P.) Bi-Polar Electrolytic
□ Non-Inflammable Resistor
■ Metal Film Resistor

RESISTORS
Are in ohms, 1/4 Watts, ± 5% Tolerance
Unless Otherwise Noted K=kΩ, M=MΩ
CAPACITORS
Are in μF, Unless Otherwise Noted P=pF
TOLERANCE
J=±5%, G=±2%, F=±1%

Each D.C Voltage measured by the instruments described below shows the nominal value in volts at 33 1/3 rpm.
Measuring Instruments
Volt Meter
Oscilloscope

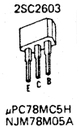
eQ1,2,3,4	2SA952(M,L)
eQ5,6,7,8	2SC2001(M,L)
eQ9,10,11,12	2SA733A(Q,P), 2SA1115(E,F) 2SA1048(Y,GR)
eQ13,17	2SA733AP, 2SA1115F, 2SA1048GR
eQ14,15	2SC945AP, 2SC2603F, 2SC2458GR
eQ16	2SB744(P)
eIC1,2	H-300BC (GOLD, SILVER)
eIC3	BA6301
eDZ1	05Z12-Y
hQ1	2SD313AL(E,F)
hQ2	2SB744(Q,P)
hIC1	μPC78M05H, NJM7805A
hD1,2	RB152
hDZ1,2	05Z16-X
fQ1,2,3	TPS605
fQ4,5,7,15	2SA1115(E,F), 2SA1048(Y,GR) 2SA733(Q,P)
fQ6,8,10,11,12,13 14,18,19	2SC2603(E,F), 2SC2458(Y,GR) 2SC945(Q,P)
fQ9	GP-1S04
fQ16	2SD600(E,F), 2SD794(Q,P)
fQ17	2SB631(E,F), 2SB744(Q,P)
fQ20,21	PHI01
fD1,2	1S2473D
fIC1	μPD652C-049
fIC2	NJM4556
fIC3	MSM4049RS, MB84049B
fIC4	MSM4066RS, MB84066B
fLD1,2,3	TLR-121
fLD4	GL-520

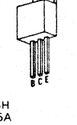
SYMBOL OF FUNCTION
(e) MO.CONTROL
(f) TA.CONTROL
(g) INDICATOR
(h) POWER SUPPLY

2SA733 2SB631
2SA952 2SB744
2SA1115 2SD600
2SA1C48 2SD794
2SC945
2SC2001
2SC2458

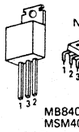
2SD313

2SC2603

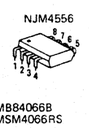




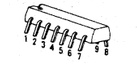
μPC78MC5H
NJM78M05A



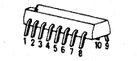
NJM4556



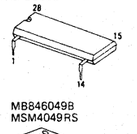
MB84066B
MSM4066RS



BA6301

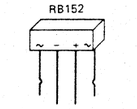


μPD652C



MB846049B
MSM4049RS

RB152



1S2473D 05Z12Y
05Z15Y
05Z15Z